

# **STIC Search Report**

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**STIC Database Tracking Number: 134479**

**TO: Zohreh Fay**  
**Location: 3a61 / 3c70**  
**Wednesday, October 13, 2004**  
**Art Unit: 1614**  
**Phone: 272-0573**  
**Serial Number: 10 / 621802**

**From: Jan Delaval**  
**Location: Biotech-Chem Library**  
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### **Search Notes**

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# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Zohreh Fay Examiner #: 66646 Date: 10/5/04  
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Title of Invention: Anti-inflammatory formulation  
Inventors (please provide full names): Haines, David ; Mahmoud, Fadia ;  
Bratt, Steven ; Wise, John  
Earliest Priority Filing Date: \_\_\_\_\_

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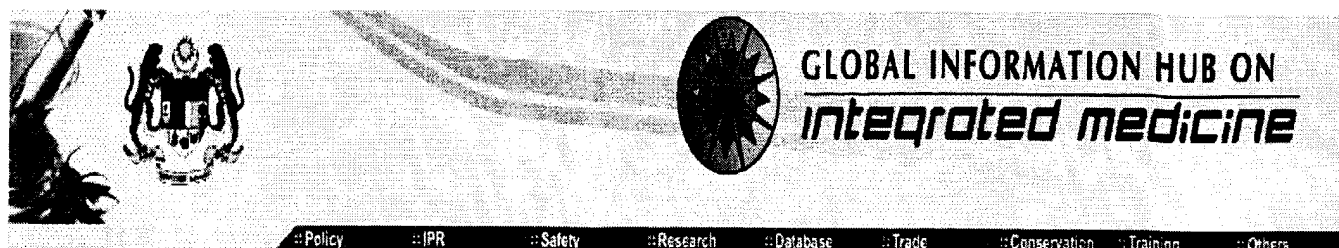
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## Ocular Health

## Professional Data

### Treatment Options

#### Conventional

Mild forms of dry eye may be treated with nonprescription tear substitutes. Ocular emollients may also be used. Occasionally, surgery may be necessary to narrow the puncta or close it off entirely.

Ophthalmic redness due to minor irritations may be treated with ophthalmic vasoconstrictors such as tetrahydrozoline, oxymetazoline, or naphazoline. These products are contraindicated, however, in patients with glaucoma, since they may produce mydriasis.

Corneal edema may be treated with 2 to 5% sterile hypertonic sodium chloride solution or ointment to draw fluid from the cornea. Usually, the dose is 1-2 drops every three or four hours or as directed by a physician. The nonprescription remedies available for allergic conjunctivitis generally contain vasoconstrictors and antihistamines such as pheniramine or antazoline. The usual recommended dose is 1-2 drops in the affected eye(s) up to four times daily.

Bacterial or viral conjunctivitis is treated with broad-spectrum ocular antibiotics, such as sulfacetamide 10%, polymixin-bacitracin-neomycin, or trimethoprim-polymixin combinations.

Glaucoma is treated with cholinergic drugs to cause miosis and constrict the ciliary muscles in order to facilitate aqueous fluid drainage from the anterior chamber. Timolol, a beta-blocker, is often used to reduce aqueous fluid formation. A complete review of glaucoma and its treatment should be reserved for a more in-depth discussion.

The discussion of ocular health is a broad topic, and many ocular manifestations of systemic diseases have been omitted, as well as detailed discussions of optic neuropathies, retinal detachment, and other conditions.

### Nutritional Supplementation

#### Antioxidant Nutrients

Antioxidant nutrients are thought to help protect the eyes against aging damage. When light enters the eye, it activates oxygen, which can initiate free radical reactions that damage the macula. Results from the Baltimore Longitudinal Study of Aging reported

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that vitamin E, vitamin C, and beta-carotene all provided antioxidant protection against the development of age-related macular degeneration (ARMD).<sup>(1)</sup> Epidemiological studies have also found that people with cataracts have lower serum levels of vitamins C, E, and carotenoids than control subjects. In one study, individuals who regularly took vitamin C and/or vitamin E as supplements had more than a 50 percent decrease in cataract risk compared to people that did not supplement with vitamins C and E.<sup>(2, 3)</sup>

#### **Lutein and Zeaxanthin**

Lutein and zeaxanthin are two carotenoids that are found in the eyes. They are concentrated in the lens and macula and have been reported to provide important protective benefits for the eyes. These compounds belong to a sub-category of carotenoids called oxycarotenoids. They are yellow pigments that are mainly deposited in an area called the yellow spot in the macula, which is the central part of the retina. One of their functions is to filter out blue light. The lens and cornea filter out ultraviolet light, but blue light passes on through, reaching the retina where it can create photo damage that contributes to the progression of macular degeneration. A review of studies on these pigments states that the concentration of dietary carotenoids in the macula is not accidental. They are antioxidants that protect the eyes by quenching oxygen free radicals and singlet oxygen, which are generated in the retina as a consequence of the simultaneous presence of light and oxygen and they protect the blood vessels that supply the macular region.<sup>(4)</sup>

Results of a study conducted at the Department of Ophthalmology, Harvard Medical School, indicated that increasing the consumption of carotenoid-containing foods lowered the risk of developing age-related macular degeneration (ARMD). Individuals with the highest quintile (20 percent) of carotenoid intake had a 43 percent lower risk for ARMD compared to the lowest quintile. In this study, lutein and zeaxanthin were the carotenoids most strongly associated with a reduced risk for age-related macular degeneration.<sup>(5)</sup> Both pigments occur naturally in a wide variety of green leafy vegetables such as spinach, kale, broccoli, and Brussels sprouts.

In a four-week study that had participants consume diets high in lutein and zeaxanthin-containing foods (spinach and corn), most showed increases in their macular pigment density.<sup>(6)</sup> In another study, two subjects were given 30mg of lutein daily for 140 days. These individuals gained a tenfold increase in their serum lutein concentration and they increased their macular pigment optical density 39 percent and 21 percent respectively, which they maintained for 40 to 50 days after discontinuing the supplement. This resulted in a 30 to 40 percent reduction in the amount of blue light reaching their photoreceptors and other vulnerable areas of the eye, and represents a substantial protection of the eyes against the type of damage that leads to macular degeneration.<sup>(7)</sup>

#### **Vitamin A**

Vitamin A is a nutrient that plays an important role in vision. In the pigment epithelial tissues of the retina, vitamin A compounds bind to opsin proteins in the rods and cones. This produces the highly photosensitive proteins, rhodopsin (in the rods) and three iodopsins (in the cones), which absorb blue, green, and red wavelengths of light. These photopigments are responsible for night vision. Night blindness (nyctalopia) is the classic vision problem resulting from vitamin A deficiency. Another problem known as xerophthalmia can also develop. This condition causes a drying and hardening of the epithelial cellular membranes in the eye, which often results in blindness. Although xerophthalmia is rare in the United States, the World Health Organization estimates that 250,000 to 500,000 preschool children lose their sight every year as a result of vitamin A deficiency, and half of them die within 12 months of becoming blind.<sup>(8)</sup> Overall, vitamin

A deficiency could be the single most common preventable cause of blindness in the world.(9)

#### **Zinc**

Zinc is a mineral that regulates the sensory perceptions of taste, smell, and vision. It has been reported that the retina of the eye contains a higher concentration of zinc than any other organ in the human body.(10) One of zinc's roles in vision is due to the fact that it is required for the synthesis of rhodopsin, which is also known as visual purple.(11) Zinc also regulates serum levels of vitamin A by controlling the release of stored vitamin A from the liver. Since vitamin A is essential to vision, a zinc deficiency could also affect vision by preventing the release of vitamin A. Another zinc attribute is the fact that it is a mineral cofactor for one of the forms of the antioxidant enzyme known as superoxide dismutase.

#### **Selenium**

Selenium deficiencies may be associated with an increased risk of cataracts. The antioxidant enzyme glutathione peroxidase, which requires four atoms of selenium per molecule, provides antioxidant protection in the eyes.(12) In one study, it was reported that the lens tissue from individuals with cataracts had significantly less selenium than the lenses of normal controls.(13)

### **Herbal Supplementation**

#### **Bilberry**

Bilberry is one of the most popular herbs on the market today. During World War II when British air pilots ate bilberries, they reported an improved ability to adjust to glare and an increase in their visual acuity and nighttime vision.(14) Bilberry extracts show promise in the areas of diabetic retinopathy, macular degeneration, cataracts, glaucoma, and varicose veins.(15) Bilberry is an excellent antioxidant.(15) Bilberry is claimed to exert a collagen stabilizing activity.(16) Collagen is responsible for the integrity of tendons, ligaments, and cartilage. In conditions such as arthritis, where the connective tissue is attacked and vascularized, anthocyanosides may be helpful. Bilberry reportedly strengthens the cross-linking of the collagen matrix and stimulates the production of collagen and mucopolysaccharides.(16) Bilberry compounds reportedly inhibit mediators of inflammation such as histamine, protease, leukotrienes, and prostaglandins.(15) Anthocyanosides may also decrease capillary permeability.(17) This is of particular importance because of the heightened integrity which occurs at the blood/brain barrier. By strengthening collagen, brain capillary integrity can be improved, as well as a reduction in infiltration by potential toxins. Anthocyanosides reportedly inhibit platelet aggregation.(18) Platelet aggregation tendencies relate to atherosclerotic and blood clotting tendencies. Bilberry has the ability to stimulate gastric mucus production which may be of value for those on nonsteroidal anti-inflammatory drugs.(19) Although all of the above effects are exciting, the most exciting is its potential effect on the eyes. With age, oxidative stress due to free radicals increases in some people more than in others. This damage to ocular tissues may lead to various eye pathologies. If it improves the oxygenation of tissue, bilberry may show promise in the areas of prevention for diabetic retinopathy, minimizing the advance of macular degeneration, and arresting cataract progression.(20, 21)

#### **Ginkgo**

Ginkgo is among the oldest living species on earth and has been used extensively as a medicinal agent worldwide for centuries, and is the most frequently prescribed medicinal herb in Europe. The most dramatic benefits are reported in improving circulation in the elderly.(22, 23) This can lead to enhanced memory, delaying the onset of Alzheimer's(24) and reducing senile

dementia,(25) tinnitus,(26) and vertigo.(27) Ginkgo's memory-enhancing effects are reported in younger populations as well. The main active components of ginkgo are the flavoglycosides. These compounds act as strong free radical scavengers or antioxidants.(28) Ginkgo is also reported to inhibit platelet activating factor (PAF) which could reduce the adhesive nature of platelets possibly through competitive binding. Ginkgo may foster vasodilation by stimulating endothelium releasing factor and prostacyclin.(29) It may also stimulate venous tone and improves the clearance of homotoxins during ischemic episodes.(30) Ginkgo reportedly acts as a tonic for the circulatory system. It may increase cerebral brain flow and, therefore, improve delivery of nutrients to the brain, enhancing elimination of the byproducts of cell metabolism and oxygenating the tissues.(23) Ginkgo may normalize acetylcholine receptors and, therefore, improve cholinergic function.(31)

#### **Green Tea**

Green tea has long been used in much of the world as a popular beverage and a respected medicinal agent. An early Chinese Materia Medica lists green tea as an agent to promote digestion, improve mental faculties, decrease flatulence and regulate body temperature. The earliest known record of consumption is around 2700 B.C. Green tea is an antioxidant that is used in promoting cardiovascular health(32, 33) reducing serum cholesterol levels in laboratory animals and humans.(34, 35) Studies suggest that green tea contains dietary factors that help decrease the development of some infectious diseases and dental caries.(36, 37, 38) Green tea also has diuretic, stimulant, astringent and antifungal properties.(39) Green tea has also been reported to enhance immunity.(40)

Green tea reportedly has antioxidant properties(41) and the ability to protect against oxidative damage of red blood cells.(42) Antioxidants protect cells and tissues against oxidative damage and injury.(43) Green tea's antioxidant effects seem to be dependent upon the polyphenol (catechin) fraction.(44, 45) It is important to note that the addition of milk to any tea may significantly lower the antioxidant potential.(46)

#### **Grape Seed Extract**

Proanthocyanidins (PCO's), the active constituent in grape seed, is a flavonoid-rich compound which is being heavily touted as one of the most potent free radical scavengers. It has been reported to enhance the absorption of and work synergistically with vitamin C.(47) PCO's have been reported to inhibit the release of mediators of inflammation, such as histamine and prostaglandins.(48, 49) Proanthocyanidins are reported to neutralize many free radicals, including hydroxyl, lipid peroxides and iron-induced lipid peroxidation.(50, 51, 52) They may inhibit the enzyme xanthine oxidase.(53) PCO's have been used in allergies because of their reported ability to inhibit degradation of mast cells and the subsequent release of histamine and other mediators of inflammation.

#### **Clinical Notes**

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There are no clinical notes available at this time.

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## COVER STORY

### Antioxidant Power

#### Blueberries and bilberries slow brain aging and protect vision

by Ivy Greenwell

When it comes to antioxidant power, according to a measure called ORAC (oxygen radical absorbance capacity), blueberries are at the top of the USDA chart-ahead of blackberries, garlic, kale and strawberries, and far ahead of broccoli and spinach. Not only that, but they taste delicious. Here, nature has been gracious to us: a favorite food has been found to be a powerhouse of antioxidants. Talk about a miracle anti-aging food that is actually a treat!

Now, by all means keep eating spinach and kale-these vegetables contain the powerful carotenoids, lutein and zeaxanthin, as well as a sulfur-containing antioxidant, lipoic acid-nutrients that help protect us against macular degeneration and cataracts, and probably against cardiovascular disease and other aging-related disorders as well. Eating spinach, kale and other green leafy vegetables at least twice a week is highly recommended. But do consider consuming half a cup or more of blueberries every day in addition to all the vegetables and fruit you already consume. Yes, you've read that correctly: this article is urging you to eat blueberries every day. Why? Because adding blueberries to your daily diet could double your antioxidant intake from food. Frozen blueberries are fine when fresh ones are out of season. Wild blueberries may be more potent than the larger, sweeter cultivated blueberries, but even the cultivated blueberries apparently can pack a ferocious punch against free radicals.



Why this sudden urgency about eating blueberries? It started with the scientists at the USDA Nutrition Research Center on Aging at Tufts University in Boston. They have discovered that the blueberry comes close to being a miracle food, considering the important health and anti-aging benefits it offers. It is rumored that the Tufts researchers themselves have begun to eat blueberries by the pint during the berry season; off-season, their freezers are stacked with frozen blueberries. Dr. James Joseph, a senior scientist at Tufts, admits that he started adding blueberries to his morning protein shake after he saw the results of his own research. This comes as no surprise: scientists have known for a long time that restoring and maintaining youthful brain function is key in slowing aging.

European bilberries (*Vaccinium myrtillus*) and North American blueberries (*Vaccinium corymbosum*) are closely related; cranberries (*Vaccinium macrocarpon*) are also close cousins to blueberries. Scientists think that the antioxidant and general anti-aging benefits of the *Vaccinium* species berries come from the compounds that give them their deep pigmentation. These compounds are a class of flavonoids (phenolic compounds) called anthocyanins, which often occur together with proanthocyanidins. Proanthocyanidins are the precursors of anthocyanins, and also excellent antioxidants in their own right.

Sometimes these complex flavonoids are referred to by an older term that seems to be regaining popularity, namely "condensed tannins." It is these tannins that give flowers, vegetables and fruit hues that include deep red, purple, mauve, blue, all the way to the extremely dark blue of Northern European bilberries, which can appear practically black. Thus, the redness of strawberries and raspberries and the blueness of blueberries are due to the same class of compounds. Elderberry, persimmon, tart red cherries (tartness indicates the presence of condensed tannins), red and purple grapes, beets, purple cabbage, and the peel of the purple eggplant also contain anthocyanins and

proanthocyanidins.

So do many flowers-the very names of certain anthocyanins such as petunidine, malvidine, delphinidine, and peonidine indicate in which flowers these anthocyanins were first discovered. The anthocyanins in hydrangea have the interesting property of imparting mauve-pink color when the plant grows in acid soil, and blue color in alkaline soil. The red-mauve hues of autumn leaves are also due to these complex polyphenols. Those stunning scarlets of New England in October are the gift of anthocyanins. The astringent taste of wine and unripe fruit is also due to various condensed tannins.

In addition, one of the most potent flavonoids-quercetin-widely researched due to its powerful anti-cancer, anti-inflammatory, and cardioprotective properties, is chemically closely related to anthocyanins. Quercetin is present in wine, ginkgo, onions, apples, black tea and grapefruit. But berries appear to have something possibly even more potent in some ways than quercetin: a simple phenolic compound called ellagic acid, which has emerged as a star in natural chemoprevention.

Please note that green tea contains mainly catechins, which are relatively simple phenolic compounds. "Simple" doesn't mean that they are less beneficial. Black tea and many fruits and vegetables contain mainly complex polyphenols, also called polymeric polyphenols, or condensed tannins. Both simple and complex polyphenols, often present side by side, have been found to have a wide range of health benefits. Ellagic acid, for instance, a powerful anti-carcinogen, is also present in many kinds of berries, including blueberries and raspberries, as well as in cherries and pomegranates. Catechins are found not only in green tea, but also in red wine and dark chocolate (cocoa powder and bittersweet chocolate are good sources; "white chocolate" does not contain polyphenols). Likewise, coffee contains not only caffeine (an alkaloid; by the way, caffeine is also a strong antioxidant), but also catechins, as well as simple phenolic acids, such as chlorogenic acid, caffeic acid, and tannic acid. Hence, for instance, the well-established effectiveness of coffee in decreasing iron levels, or helping fight certain bacterial and viral infections.

Tannins are very common in the plant world. Apart from the sources already mentioned, they are also found in the bark of various trees-the best-known bark extract, Pycnogenol, comes from the bark of the French Maritime Pine, *Pinus maritima*. The wide distribution of tannins in the plant kingdom is probably related both to their antioxidant and antimicrobial properties. The presence of tannins in wood, for instance, is likely to be a key reason for the durability of wood. The fact that chocolate doesn't spoil in spite of its high fat content is also due to these fascinating polyphenols. Also, in spite of containing sugar, chocolate, like tea and other flavonoid-rich foods, appears to help prevent cavities. There is emerging evidence that thanks to their antimicrobial action, flavonoids can help prevent dental decay and oral diseases.

Bioflavonoids in general are amazingly bioactive with a wide range of benefits. Like many other powerful antioxidants, they show a biphasic action, depending on the dose. Lower doses, available from diet and supplements (even if you take several capsules per day of various flavonoid extracts, it is still a fairly low dose) act as antioxidants and raise the levels of reduced glutathione (GSH) and vitamin C. Negative effects such as pro-oxidant action and glutathione depletion become an issue only if huge megadoses are taken over a longer period of time. Again: neither blueberry eaters nor supplement takers need worry, since it would be very difficult and extremely expensive to reach the kind of tissue concentrations at which damage from flavonoids might occur. As Dr. Shukitt-Hale says, "You can't overdose on blueberries."

At the same, we badly need more research to investigate some unanswered questions about the dose range that produces optimum results. And of course, as usual, there are questions about in-vivo effects and complex interactions. Taking a single very potent flavonoid such as quercetin in megadoses (several grams a day, for instance) for an extended period of time should not be done without the supervision of an experienced clinician. We must remember that flavonoid research is still in infancy, and our knowledge is partial at best.

A lot of the benefits of phenolic compounds stem from their antioxidant properties. Flavonoids are powerful scavengers of free radicals. They also enter the body's antioxidant network, boosting the levels of vitamin C and of our chief endogenous antioxidant, glutathione. Higher levels of ascorbate and glutathione mean better protection of DNA and cell proteins against free radical damage. Higher levels of glutathione also mean better recycling of other antioxidant compounds, including, very importantly, estrogens, to their reduced (antioxidant) form so that these substances do not produce damage. Estrogens are excellent at protecting neural membranes from peroxidation and preventing neural death-but only if there is sufficient glutathione to keep recycling these powerful hormones to their antioxidant form. Thus, the ability of phenolic compounds such as anthocyanins to raise glutathione levels is extremely important. This, together with the inhibition of the enzymes needed for cell proliferation, such as tyrosine kinase and ornithine decarboxylase, leads to a longer cell cycle and a lower cellular turnover, since fewer damaged

cells need to be replaced. The implications for anti-aging and cancer prevention are profound.

#### **Hormone-like?**

You may wonder why flavonoids have such a wide range of physiological effects, resembling those of hormones. Apparently this stems from the fact that flavonoids have chemical and structural similarities to steroid hormones, thyroid hormones, prostaglandins, retinoids, and fatty acids. Thus it should not be altogether surprising that flavonoids can even affect gene expression-both the expression of our own genes, and the genes of the various bacteria and viruses that may invade us.

Flavonoids can also attach themselves to proteins, modulating the action of enzymes. They inhibit certain digestive enzymes and also the kinase enzymes necessary for cell proliferation. This partly explains how flavonoids can serve as a valuable adjunct cancer therapy for many kinds of cancer. When very high doses of flavonoids are used, the proliferation of normal cells is also inhibited, but that generally doesn't hurt these cells, which just "sit." In fully developed cancer, however, tumor cells cannot survive in the resting state.

On the other hand, very high levels of flavonoids are undesirable for women seeking to become pregnant, since these compounds are also known to decrease fertility, possibly by modulating hormone levels and even by interfering with the critical early stages of pregnancy. Soy and red clover phytoestrogens are a particular culprit here, acting as endocrine disruptors because of their high ability to bind to estrogen receptors. Less estrogenic flavonoids may have less impact on the menstrual cycle and other aspects of fertility. A lot remains to be explored.

We are barely beginning to research flavonoids and other phytochemicals in the kind of depth they deserve. For a long while it has been known that people who consume more vegetables and fruit showed significantly superior health compared to those eating the least, especially in regard to lower rates of cardiovascular disease and cancer. Now the reasons for this are emerging. While eating a wide variety of plant foods is highly recommended, due to the synergy of various phytochemicals, we are discovering that certain compounds are particularly valuable. The phytochemicals in blueberries and bilberries are now at the top of the list.

What is so special about blueberries and bilberries? They are the richest known source of anthocyanins. But it's possible that it is the synergy of the various compounds these berries contain that is responsible for the dramatic results recently obtained at Tufts University in Boston.

**Continued**

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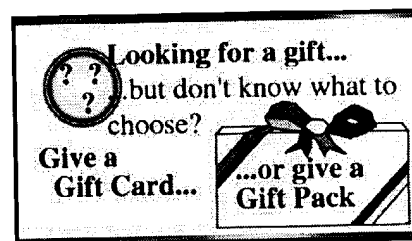
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## **DESCRIPTION & PRICE**

Cascading Revenol<sup>®</sup> is a mega-powered antioxidant formulation that contains an army of free radical quenchers to support all antioxidant cascades. While individual antioxidants grab one free radical and then change state, becoming free radicals themselves, Cascading Revenol's<sup>®</sup> advanced antioxidant cascading formulation provides cooperative antioxidants that are able to neutralize most free radicals that are formed to minimize oxidative damage. Neways' Cascading Revenol<sup>®</sup> has an Oxygen Radical Absorbance Capacity (ORAC) value of 3600.

Antioxidants assist the natural enzymatic repair system of the cells of the body from damage caused by free radicals. Free radicals are unstable molecules that attack DNA and mitochondria, thereby impairing the functional health of membranes and organs. This damage impedes the replication of healthy cellular material throughout the body. (Take the Cellular Health Challenge.)

Antioxidants act as a protector against exposure to ultraviolet or gamma radiation, pesticides, preservatives, chemical pollution and heavy metals, all of which produce free radicals in the body. Free radicals are implicated in the causation of over 60 degenerative diseases and play a key role in conditions such as the aging process, cancer and atherosclerosis. The body's natural fight against free radicals is covered by the enzymes: superoxide dismutase (SOD), catalase (CAT) and glutathione peroxidase. Diet and supplements provide additional sources of free radical quenching antioxidants. Intake of antioxidant nutrients can reduce the risk of many diseases by achieving a reversal of many symptoms caused by free radical damage.



Over 1100 different families of free radicals are known to exist. They are everywhere--in the air you breathe, the food you eat, even the sunshine can activate free radicals. Although some antioxidants are superior in selectively fighting specific free radicals, there is no one single antioxidant that can rid the body of all free radicals.

Cascading Revenol<sup>®</sup> not only provides the best antioxidants in the doses the body needs; but its unique formulation will also provide the benefits of antioxidant cascades.

In several cases, after an antioxidant molecule has scavenged a free radical, the antioxidant molecule itself becomes a free radical. Vitamin E and C are excellent examples of useful antioxidants that absorb up to one free radical per molecule and then become free radicals. However, Neways' Cascading Revenol<sup>®</sup> formulation allows for Vitamin C to regenerate the antioxidant effects of Vitamin E. Glutathione is responsible for the regeneration of Vitamin C to its original beneficial form. Then, Alpha Lipoic Acid helps do the same for Glutathione. This process is further carried out by other ingredients in the never-ending antioxidant cascading combinations. An impressive cascade consists of the antioxidant

molecule, carnosic acid, found in Neways' Rosemary Extract. Other cascades in Cascading Revenol® are found within the relationship between carotenoids, bioflavonoids, selenium and sulphate. These antioxidants work together to reactivate the free radical scavenging activity of otherwise inert antioxidant molecules.

Different antioxidant nutrients act in very different ways. Some antioxidants act upon cellular cytoplasm, some in the cell nuclei, others in cell membranes, and still others in the aqueous portion of the bloodstream or within particles of lipoprotein in the blood. Various antioxidants also vary in their efficiency against free radicals and other reactive oxygen species. Just as one vitamin or one mineral is not the key to total health, one antioxidant is not the key to effective free-radical elimination and longevity. Cascading Revenol® contains all the major antioxidants the body needs to combat free radical damage.

☑ **Decaffeinated Green Tea Extract:** This extract has a 90% catechin content from the leaves of tea (*Camellia sinensis*). Epigallocatechin gallate is the most prominent of the catechins with antioxidant and antibacterial effects. Green Tea protects against oxidation of lipids such as LDL cholesterol and aids in the suppression of several types of diseases and body fat. Green Tea also has a positive effect on blood pressure, and demonstrates properties that may help in the fight against ulcers, viruses, mutagens, radiation and carcinogens. Neways includes a very high dose of this exceptional antioxidant in Cascading Revenol®.

☑ **Grape Seed Extract:** Contains Oligomeric Proanthocyanidins (OPCs) which are a family of antioxidants responsible for the famous French Paradox (a reduced incidence of heart disease despite a high-fat, high-cholesterol diet in the French population). Cascading Revenol® is rich in Procyanidin Dimers, the single most powerful Oligomeric Proanthocyanidin (OPC) found in grapes. Grape Seed Extract also contains Anthocyanidins (useful in supporting and maintaining vision and improving capillary strength), Resveratrol (which has anti-thrombotic, anti-inflammatory and anti-carcinogenic effects) and bioflavonoids (which contribute significantly to the cascade effect of this formulation). Neways' Grape Seed Extract is readily absorbed into the blood stream and has proven to increase serum antioxidation potential by protecting proteins and LDL cholesterol against oxidative damage. This evidence supports the claim that it significantly reduces the risk of chronic diseases such as cancer and coronary heart diseases. Other researchers believe Grape Seed Extract helps Vitamin C enter cells, protecting against oxidative damage by strengthening cell membranes.

☑ **Ellagic Acid:** A phenolic in Grape Seed Extract. This antioxidant provides protection against oxidative damage. It is also a proven anti-carcinogen, anti-mutagen, and anti-cancer initiator, which acts by binding cancer-causing chemicals to make them inactive.



☑ **Esterified Vitamin C:** Esterified Vitamin C, Ester-C<sup>®</sup>, means that several ascorbic acid molecules have been linked together to form one large molecule. This is advantageous because non-ester forms of Vitamin C are quickly eliminated from the body. Approximately 73 percent of ascorbic acid is removed from the body in less than 24 hours while only 5 percent of the ester form is eliminated. This lets Esterified Vitamin C be more effective in the body for longer periods of time. While ascorbic acid has a pH of 2.4, Esterified C is neutral and is therefore easier on the digestive system. As a powerful antioxidant, Vitamin C protects LDL cholesterol from oxidative damage, aids in the formation of collagen and liver bile, fights viruses including the common cold, lowers blood pressure, lowers the risk of developing cataracts, and has shown to help protect people with diabetes from accumulation of sorbitol in eyes, nerves and kidneys.

☑ **N-acetyl Cysteine (NAC):** NAC is an altered form of the amino acid Cysteine. As an antioxidant it protects the liver from exposure to several toxic chemicals. It is essential in its contribution to the Glutathione cascade by helping the body synthesize Glutathione. Double blind research has found that NAC supplements improved symptoms in individuals with bronchitis.

☑ **Rosemary Extract:** Rosemary, *Rosmarinus officinalis*, possesses the cascading ability to rejuvenate Vitamin E. It also participates in the Carnosic Acid Cascade. Once the antioxidant molecule, Carnosic Acid, has extracted a free radical, it changes its structure and becomes Carnosol. Carnosol also extracts a free radical and then changes again, becoming Rosmanol. Rosmanol continues the free radical scavenging until Galdosol is created, further continuing the scavenging process.

☑ **Astaxanthin:** One of the strongest antioxidants available that has the very rare ability to support healthy cellular function. Astaxanthin is a fat and water-soluble nutrient able to attach itself to lipoprotein for fast travel in the bloodstream and excellent bioavailability. Its polar power enables this nutrient to attach itself to hydrophilic nodes found on the sides of the cell membrane and to the cell membrane bilayer where the free-radical attack is first encountered. Neways' Astaxanthin is an extract of the microalgae, *Haematococcus pluvialis*, that contains the highest concentration of this antioxidant known to man. In the form of a long double-bond chain, Astaxanthin stabilizes molecules by adding them to its own structure rather than donating atoms or electrons. This chain is able to support cellular health and replication by scavenging free radicals for a longer period of time than most antioxidants. This antioxidant also has the power to neutralize singlet and triplet oxygen by de-charging them while trapping more types of free radicals than any other antioxidant, such as alkoxyl, peroxy and hydroxyl radicals. Astaxanthin has cell-strengthening powers, anti-inflammatory capabilities and is a lipid-peroxidation inhibitor (100 to 500 times more

powerful in this area than Vitamin E) and an immune system booster, which creates more antibody-producing cells while suppressing interferon-gamma production. It is also a strong support of the respiratory, digestive, urinary, reproductive, glandular, and cardiovascular systems. Enhancing mental acuity and concentration, Astaxanthin also promotes emotional and mental health. As a component in the mitochondria, it boosts energy and promotes the building of stronger muscle function, strength and physical stamina. Astaxanthin also enhances the liver (when needed) and the actions of Vitamins C and E.

☑ **Carotenoid Complex**: The carotenoid family found in several yellow and orange vegetables, consists of antioxidants such as beta-carotene, lycopene, lutein and zeaxanthin. Beta-carotene can be converted into Vitamin A and acts as an antioxidant and immune system booster. Lycopene, found in tomatoes, is an inhibitor of human cancer cells, decreases the risk of heart disease, and boosts the immune system. Lutein and Zeaxanthin have proven to decrease the risk of macular degeneration (the leading cause of blindness in older adults) and cataracts. The Carotenoid Complex is also described as the first step in the carotenoid-flavonoid-selenium-sulfate antioxidant cascade.

☑ **Vitamin E**: Vitamin E, as d-alpha-tocopheryl acetate, protects cell membranes and other fat-soluble parts of the body, reducing the risk of heart disease. Reported in the double blind CHAOS study in which people were given 400-800 IU vitamin E per day, there was a 77 percent drop in nonfatal heart attacks. Vitamin E works with selenium to increase the fluidity of the blood and protect fat-soluble parts of the body by protecting LDL lipids from lipid peroxidation. It is key for normal growth and development, stimulates the immune system and assists in the utilization of protein for energy by the body. Vitamin E also helps maintain and protect Vitamin A and increase its storage in the body.

☑ **Bioflavonoid Complex**: Flavonoids contribute to Glutathione in the body and the regeneration of several antioxidants including Vitamins A and C. Bioflavonoids assist capillary and connective tissue strength, act as anti-inflammatory and antiviral agents, and have anticancer effects. Quercetin is another bioflavonoid found in Cascading Revenol®.

☑ **Turmeric Extract**: This is an orange-yellow spice found in curry. Neways turmeric contains a 95% curcuminoid content. Its antioxidive properties are seen in its ability to neutralize existing free radicals, prevent oxidative cascades, and stop free radical formation. Turmeric is also known for its anti-inflammatory effects and its ability to inhibit the formation of cancer cells and mutagens.

☑ **Alpha Lipoic Acid**: This antioxidant plays a key role in supporting the

conversion of glucose to energy, like insulin, by facilitating the uptake of glucose in muscle cells. It is one of the only antioxidants that can easily pass through the blood brain barrier (important for protection against stroke damage). Once Vitamin E and C have been oxidized, Glutathione neutralizes them, and Alpha Lipoic Acid then neutralizes Glutathione. This helps to conserve Vitamins E and C in the body, rendering them more productive. Alpha Lipoic Acid is necessary in properly networking all other antioxidants. It also energizes the metabolism, detoxifies the body of heavy metals and toxic metals, assists the nervous system, and promotes the immune system.

☑ Co-enzyme Q10: Co-Q10, also called Ubiquinone, is found in all cells of the body. Mostly concentrated in the mitochondria, it aids metabolic reactions by helping convert food into energy as ATP. Co-Q10 protects the body from free radicals, helps reduce congestive heart failure, increases immunity, and helps people with hypertension by reducing resistance to blood flow.

☑ Glutathione: Vitamin C is regenerated by Glutathione in the antioxidant cascade. It is also synergistic with Vitamin E as an antioxidant. Glutathione has proven to decrease oxidative stress of lipids.

☑ White Pine Bark Extract: American Indians soaked the bark in water overnight and applied to wounds. They also boiled the inner bark of saplings and drank the tea to support against dysentery. White Pine Bark assists for bladder and kidney infections, for rheumatism, and for diseases of the mucus membranes and respiratory system. It can be used as an inhalant to combat bronchitis, laryngitis and respiratory congestion. Mainly used as an antioxidant, it assists the enzymes necessary for the regeneration of Glutathione.

☑ Taurine: Taurine is a sulphur containing beta-amino acid found mostly in the brain and heart. It functions as an osmoregulator, thermoregulator, neuromodulator and potential neurotransmitter. Taurine is beneficial in the regulation of the nervous system.


☑ Inositol: This white crystalline nutrient is required for proper formation of cell membranes. It affects nerve transmission and helps in transporting fats within the body. It is also a hydroxyl radical scavenger and is essential for growth.


☑ Selenium: Selenium enhances the antioxidant effect of Vitamin E and activates Glutathione. It is essential for healthy immune functioning and has been found to stimulate the activity of white blood cells. Selenium supplementation decreases the cancer death rate when compared to a placebo group.

☒ Potassium Sulfate, Copper and Zinc Monomethionine contain essential elements that act as antioxidants and are necessary supplements in the cascading effects.

The benefits of an army of the most superior antioxidants in the world are all in one bottle-- Cascading Revenol<sup>®</sup>. There is no comparison in the nutritional industry.

## PRICE

60 ct. (Item #1701), \$68.65,  

PC Price    
\$48.00\*

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\*To shop as a Preferred Customer (at the PC Price) simply fill out the Preferred Customer Application and Neways will send you a Preferred Customer Number. Yes, you may send in your first order and application at the same time; just leave the Preferred Customer Number blank and Neways will assign you one (and mail it to you for future orders).

## USAGE

Adults take 2 capsules daily.

Children may take one capsule per day.

Household pets such as dogs and cats may take one capsule per day.

Dosage can be adjusted to combat the effects of aging, environmental conditions, illness, disease and stress.

People with the following conditions should consult a health care provider before supplementing with Vitamin C: glucose-6-phosphate dehydrogenase deficiency, iron overload (hemosiderosis or hemochromatosis), a history of kidney stones, or kidney failure.

If taking anticoagulants such as warfarin (Coumadin<sup>®</sup>), Coenzyme Q10 is structurally similar to Vitamin K and has been reported to interfere with warfarin activity. It remains unknown how common or rare this interaction is. Those taking anticoagulants should only take CoQ10 with the guidance of a health care provider. Congestive heart failure patients who are taking CoQ10 should not discontinue its use without first consulting a health care provider.

Studies show that extremely large amounts of cysteine may be toxic.

Persons with symptoms of gallstones or obstruction of bile passages should avoid turmeric.

Side effects with alpha lipoic acid are rare but can include skin rash and the potential of

hypoglycemia in diabetic patients.

High potassium intake (several hundred milligrams at one time) can produce stomach irritation.

People with Wilsons disease should never take copper.


Taking more than 1,000 mcg of selenium per day can cause loss of fingernails, skin rash, and changes in the nervous system. In the presence of iodine-deficiency induced goiter, selenium supplementation has been reported to exacerbate low thyroid function.


As with any nutritional supplement, consult a health care provider prior to use if you are pregnant or nursing, have a medical condition, or are taking any medication. Also, please store out of reach of children.


## COMPLEMENTARY PRODUCTS

**Maximol Solutions®**, a Fulvate infused, microcolloidal solution that supplies minerals, amino acids, essential vitamins and enzyme groups to help rejuvenate the body's biosystems.

500 ml /16.9 oz. (Item #1830 Classic    
Unflavored), \$35.35,


PC Price    
\$24.70\*

500 ml /16.9 oz. (Item #1835 Berry    
Flavored), \$38.95,

PC Price    
\$27.95\*

500 ml /16.9 oz. (Item #100425 Berry    
Flavored), \$38.95,


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PC Price    
\$27.95\*

**LIMITED TIME SPECIAL:** also receive a  
Stainless Steel Serving Cup with Neways Logo--  
While supplies last

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**Youthinol**, promotes healthy muscle mass, normal immune system function, cardiovascular health, healthy metabolic rates and enhanced feelings of libido.


60 ct. (Item #1018), \$43.95,  

PC Price    
\$30.80\*

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To receive a free "Youthinol Information Sheet," click here.


For more information on Dioscorea, DHEA and Wild Yam, a "DHEA, Dioscorea-Technical Information Pack" is available for the assembly fee:

 Tech Info Pack/DHEA Dioscorea, (Item #0037) Assembly Fee \$4.00

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**BioGevity Professional Strength**, supports the development of lean body mass, reduction of body fat, feelings of energy, clarity of thought and enhanced sleep patterns.

60 ml/2 oz. (Item #1059), \$94.40,  

PC Price  

**\$66.00\***

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\*To shop as a Preferred Customer (at the PC Price) simply fill out the Preferred Customer Application and Neways will send you a Preferred Customer Number. Yes, you may send in your first order and application at the same time; just leave the Preferred Customer Number blank and Neways will assign you one (and mail it to you for future orders).

## **WHAT OTHERS HAVE SAID**

### **Write Your Response To Share With Others.**

"Norman and I have been taking vitamins for years, yet since we have been taking Neways products *[the ones they recommend to start with are Maximol Solutions<sup>®</sup>, Osteo Solutions, Hawaiian Noni<sup>®</sup>, Life Enhancer, Orachel, Cascading Revenol<sup>®</sup> and BioGevity]*, there has been an incredible difference in how we feel."

--M.W.

"My patients that use Neways nutritionals are healthier and happier. Truly, the nutritional impact on my patients' lives has been far-reaching and health-enhancing."

--Dr. Kai-Yee Lok, Physician and Acupuncturist

### **Question: Which cellular health products would you suggest for my lifestyle?**

**Answer:** Examine your lifestyle and health risks. Determine which cellular health step to start with--cell nourishment, cell environment cleansing, cell immune support, or cell purification. All teenagers and adults need essential minerals (Maximol Solutions<sup>®</sup>) and fulvates for basic cellular nourishment. Over the age of 20, we need to combat degrading environmental contaminants with Cascading Revenol<sup>®</sup> and D-Toxarate as part of cleansing our cell environment. After we reach age 30, our cells need immune support supplied by Neways unique Authentic Hawaiian Noni<sup>®</sup>. Finally, when we want optimal cellular support, we can go to Perillyl Extract and Cassie-Tea.

--Dr. Cole Woolley, Chemist

"As a doctor, I know that the health care products of the Neways company, including the line of Tibetan formulations, are unique and effective. It appears that these products not only have tremendous complementary properties, but they also have superb balancing potential. Testing in the biggest medical centers in the world has proven the effectiveness and safety of Neways products. I am deeply convinced that Neways herbal formulas are a great help to those who desire to fight heart, lung, and other internal organ challenges as well as address depression and other nervous disorders."

--Dr. Boris Persiz, Russian Gastroenterologist

"I've looked at hundreds of company's cosmetics, personal care products and dietary supplements. Usually, in spite of all the hype, I am disappointed. But Neways is different."

They are producing truly safe and healthy formulas that we rank among the best in the world today. Indeed, they're the only network marketing company doing so. I give 110% support to Neways. You can't do better than offering the Neways' formulas. They're great for the world, for the environment, and for your body and home. What a great way to make a living! You really will profit, both materially and spiritually from your Neways association and involvement."

**--David Steinman, Co-author of The Safe Shopper's Bible, and The Breast Cancer Prevention Program, chairman of Citizens for Health, publisher of 3 of the largest, most popular health letters in the US: "The Doctor's Prescription for Healthy Living," "Pharmacist's Choice" and "The Doctor's Oral Enzyme Health Letter."**

"I believe that nutrition is another key to success. Proper nutrition is vital to three major focuses of successful gymnastics training: (1) weight management, (2) injury prevention and recovery, and (3) energy, stamina, and endurance development and maintenance. In 1994, I was introduced to Tom Mower, founder of the nutritional health products company, Neways. As my athletes prepared for the 1996 Olympics in Atlanta, Georgia, I observed the effects that Neways' nutritionals seemed to have on their preparation, and became convinced that I had discovered a critical missing link in athletic training and performance--nutritional supplementation. Because gymnastics is a sport of balance and strength, I now recommend Neways' nutritional products to help gymnasts of all ages strengthen and balance their training regimens."

**--Bela Karolyi, USA Olympic Gold Medal Winning Woman's Gymnastic Coach**

"I attended the Cancer Awareness Convention in Universal City, CA this past Labor Day weekend. I had a doctor perform a live blood cell test on me. They can check for oxygenation, cholesterol, parasites, aging and oxidation damage, mineral and vitamin deficiency, pre-carcinogenic activity and numerous other items. My blood was perfect. He said I fall into the top 5% of the healthiest people. He was very impressed. I had this live blood cell test done about 9 years ago and I was not as healthy then as I am now. This test is the confirmation that Neways products work and work well."

**--Michael D'Avolio, 9/2001**

## **INGREDIENTS: WHAT THEY ARE AND WHAT THEY DO (7/23/03)**

<b><u>Vitamin A (as alpha and beta carotene)</u></b>	<b><u>Turmeric Root Extract</u></b>
<ul style="list-style-type: none"> <li>➤ A Carotenoid Complex</li> <li>➤ Antioxidant</li> <li>➤ Supports the maintenance of healthy skin, hair and nails</li> <li>➤ Supports the immune system</li> </ul>	<ul style="list-style-type: none"> <li>➤ Turmeric is an extract of the Curcuma longa root</li> <li>➤ Curcuminoids</li> <li>➤ Supports the maintenance of healthy blood sugar and cholesterol levels</li> <li>➤ Antioxidant</li> </ul>

### **Vitamin C (as calcium ascorbate Ester C)**

- Antioxidant
- Preservative
- Supports healthy tooth and bone formation
- Supports the immune system

### **Zinc (as zinc monomethionine)**

- A chelated form of zinc which is more bioavailable than just plain zinc alone
- Supports cell respiration
- Supports DNA and RNA replication
- Supports the function of antioxidants
- Supports the efficiency of the immune system

### **Grape Seed Extract**

- Powerful antioxidant
- Supports the circulatory system
- Supports the respiratory system
- Supports the body against minor inflammation
- Contains the beneficial and naturally occurring Oligomeric Proanthocyanidins (OPC's), Ellagic Acid and Resveratrol
- A Note About Extracts: These are natural ingredients and the vitamin/nutrient profile is going to change

### **➤ Astringent**

- Supports the body against minor inflammation
- Supports the digestive system
- Supports the circulatory system
- Supports the maintenance of a healthy respiratory system

### **➤ Supports healthy skin**

- Supports the maintenance of a healthy reproductive system

### **➤ Supports the health of the liver**

- Supports the maintenance of normal cell functions

### **➤ Supports the immune system**

- Supports the maintenance of a healthy urinary tract

➤ A Note About Extracts: These are natural ingredients and the vitamin/nutrient profile is going to change from time to time depending on the growing conditions, where they were sourced, etc.

### **Alpha Lipoic Acid**

- Antioxidant
- Supports the body's energy processes
- Supports the maintenance of a healthy nervous system
- Supports the functioning of other antioxidants-especially Glutathione,



from time to time depending on the growing conditions, where they were sourced, etc.

#### **Selenium (as selenium yeast)**

- An essential trace mineral
- Supports the maintenance of normal cell functions
- Supports cell respiration
- Supports DNA and RNA replication
- Supports the functions of antioxidants

#### **Copper (as amino acid chelate)**

- Supports the health of the heart
- Supports the maintenance of healthy cell respiration
- Supports DNA and RNA replication
- Supports the functioning of antioxidants

#### **Potassium (as potassium sulfate)**

- Supports the maintenance of healthy blood pressure levels

#### **Green Tea Extract (decaffeinated)**

- Polyphenolic antioxidant
- Supports healthy skin
- Moisturizer

#### **Vitamin C and Vitamin E**

- Supports healthy metabolic processes
- Supports the body's detoxification efforts
- Supports healthy replication of RNA and DNA
- Supports the maintenance of a healthy liver
- Supports the immune system

#### **CoEnzyme Q-10**

- Supports the liver's efforts to detoxify the body
- Antioxidant
- Supports the maintenance of a healthy heart
- Supports the maintenance of healthy blood pressure levels
- Supports the immune system
- Supports the body against minor inflammation
- Supports the health of the nervous system

#### **White Pine Bark Extract**

- Antioxidant
- Contains the beneficial and naturally occurring Oligomeric Proanthocyanidins (OPC's)

➤ A Note About Extracts: These are natural ingredients and the vitamin/nutrient profile is going to change from time to time depending on the growing conditions, where they were sourced, etc.

#### N-Acetyl Cysteine

➤ Supports the functions of antioxidants-  
-especially Glutathione

#### Quercitin

- From citrus fruit
- Antioxidant
- Supports relaxation
- Supports the cardiovascular system

#### Rosemary Leaf Extract

- Supports the maintenance of healthy skin
- Supports healthy digestion
- A Note About Extracts: These are natural ingredients and the vitamin/nutrient profile is going to change from time to time depending on the growing conditions, where they were sourced, etc.

#### Vitamin E (as d-alpha tocopheryl acetate)

- Antioxidant
- Preservative

➤ A Note About Extracts: These are natural ingredients and the vitamin/nutrient profile is going to change from time to time depending on the growing conditions, where they were sourced, etc.

#### Algae Extract

- Supports the maintenance of natural Hyaluronic Acid in the skin
- Is high in Astaxanthin

#### Inositol

- Supports the maintenance of healthy blood pressure levels
- Supports the maintenance of healthy hair and skin
- No known toxicity

#### Taurine

- Supports the nervous system
- Amino acid
- Antioxidant
- Supports the function of other antioxidants
- Supports the maintenance of proper ion concentrations within cells
- Supports the maintenance of a healthy cardiovascular system

- Supports healthy skin
- Supports healthy circulation
- Supports the maintenance of healthy blood pressure levels

#### Calcium (as calcium ascorbate Ester C)

- Supports the maintenance of healthy blood pressure levels
- Supports the maintenance of healthy bone mass

#### Citrus Bioflavonoid Complex

- Antioxidants
- Supports the functioning of other antioxidants-especially Green Tea, Vitamin C, and Glutathione
- Supports the maintenance of a healthy cardiovascular system
- Supports the maintenance of healthy connective tissues
- Supports the immune system

#### Glutathione

- Antioxidant
- Supports the maintenance of healthy eyes
- Supports the function of other antioxidants--especially Vitamin C and Vitamin E

#### Hydroxypropylmethylcellulose

➤

#### Millet Flour

➤

#### Microcrystalline Cellulose

- Bulking agent
- Viscosity increasing agent

#### Silicon Dioxide

- Bulking agent

#### Magnesium Stearate

- Bulking agent
- Anti-caking agent

☑ Neways' products contain natural ingredients, which may cause slight color and shade variations. Neways' natural ingredients are safe, effective and superior thereby providing peace of mind.

#### **NEWAYS' PRODUCTS DO NOT CONTAIN**

Artificial stimulants  
Toxic heavy metals

**All of which are known to be potentially  
harmful ingredients.**

☑ Neways' formulas are not static and changes can be expected from time to time. Neways' Research & Development staff is continually researching products, ingredients

and delivery mechanisms; consequently, changes can be expected as improvements are made on Neways' older, but very dynamic products' formulations and new products, including better and more effective ingredients, are developed. Sometimes these changes might seem illogical, when in actuality they are evidence of Neways' commitment to uphold the corporate vision of safety, efficacy and technology.

☒ Yes, there is information concerning which of Neways' products are not Vegan, Vegetarian or Biblically edible.



Neways has been awarded the Seal of Safety from the Cancer Prevention Coalition.

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**(4) Neways is promoting safety-conscious formulas worldwide.**


**(3) Neways' toiletries and cosmetics have been awarded the Seal of Safety from the Cancer Prevention Coalition.**

**(2) People around the world testify to the effectiveness of Neways' products.**

**(1) Your health and life are worth it!**



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=> d his

(FILE 'HOME' ENTERED AT 12:56:27 ON 13 OCT 2004)  
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 12:56:50 ON 13 OCT 2004

L1 2 S (US20040076691 OR US20030170328)/PN OR (US2002-350298# OR US2  
E HAINES D/AU  
L2 117 S E3-E17,E25-E35  
E MAHMOUD F/AU  
L3 26 S E3,E6,E11-E15  
E PRATT S/AU  
L4 41 S E3  
L5 11 S E57,E59,E63  
E WISE J/AU  
L6 164 S E3-E23  
L7 135 S E45-E65

FILE 'REGISTRY' ENTERED AT 13:07:44 ON 13 OCT 2004

L8 2 S 472-61-7 OR 144-68-3  
L9 11 S (472-61-7 OR 144-68-3)/CRN  
L10 195 S (C40H52O4 OR C40H56O2)/MF AND C6/ES AND 2/NR  
L11 20 S L10 AND ZEAXANTHIN  
L12 17 S L10 AND ASTAXANTHIN  
L13 36 S L11,L12  
L14 29 S L13 NOT ((D OR T)/ELS OR LABELED OR ION OR 11C# OR 13C# OR 14  
SEL RN 1 9 27  
L15 26 S L14 NOT E1-E3  
L16 26 S L8,L15

FILE 'HCAPLUS' ENTERED AT 13:12:22 ON 13 OCT 2004

L17 4633 S L16  
L18 5433 S ASTAXANTHIN# OR ZEAXANTHIN#  
E CAROTINOID/CT  
L19 12 S E4  
E CAROTENOID/CT  
L20 5174 S E8  
E E8+ALL  
E E2+ALL  
L21 17621 S E8-E10  
L22 8263 S E7  
L23 28000 S L17-L22  
E FLAVONOID/CT  
L24 634 S E8-E13  
L25 3 S E33,E34  
E E6+ALL  
L26 18306 S E4  
E POLYPHENOL/CT  
E E10+ALL  
L27 4314 S E4  
E PHENOL/CT  
E PHENOLS/CT  
L28 4314 S E24  
L29 5981 S E3 (L) (POLY OR POLYPHENOL?)

FILE 'REGISTRY' ENTERED AT 13:16:54 ON 13 OCT 2004

L30 1 S QUERCETIN/CN

FILE 'REGISTRY' ENTERED AT 13:18:00 ON 13 OCT 2004

FILE 'HCAPLUS' ENTERED AT 13:18:10 ON 13 OCT 2004

L31 9944 S L30  
L32 13891 S QUERCETIN# OR QUERCETOL OR QUERCITIN# OR QUERTIN# OR SOPHERET

L33 21440 S BILBERRY OR BLUEBERRY OR HOPS OR GRAPESEED OR GRAPE SEED OR G  
E BILBERRY/CT  
L34 180 S E3-E6 OR E3+OLD,NT  
E BLUEBERRY/CT  
L35 630 S E3-E7,E9  
L36 780 S E3+OLD,NT,PFT,RT  
E CHERRY/CT  
L37 2357 S E3-E22,E24,E29  
E E3+ALL  
L38 3721 S E13,E12+NT  
E HOPS/CT  
L39 1543 S E3  
E E3+ALL  
L40 322 S E2  
E E2+ALL  
L41 3395 S E8,E9,E7+NT  
L42 1148 S HUMULUS  
L43 2001 S VACCINIUM  
L44 414 S CERASUS  
E CURCUMA/CT  
E E26+ALL  
L45 1203 S E9-E12,E8+NT OR E7  
L46 1043 S TURMERIC  
E GREEN TEA/CT  
E E3+ALL  
L47 1840 S E2  
E GREEN TEA/CT  
E E7+ALL  
L48 503 S E2  
E GREEN TEA/CT  
E E9+ALL  
E GREEN TEA/CT  
E E4+ALL  
E TEA PRODUCTS/CT  
L49 3038 S E3 (L) GREEN  
E GRAPESEED/CT  
E GRAPE SEED/CT  
L50 5 S E5  
E GRAPE/CT  
L51 464 S GRAPE#/CW (L) SEED  
E BIOFLAVONOID/CT  
E E4+ALL  
L52 230 S E2  
L53 796 S BIOFLAVON?

FILE 'REGISTRY' ENTERED AT 13:27:22 ON 13 OCT 2004

L54 1 S 329900-75-6  
E COX/CN  
L55 2 S E6-E8

FILE 'HCAPLUS' ENTERED AT 13:27:45 ON 13 OCT 2004

L56 5400 S L54,L55  
L57 29599 S COX OR COX2 OR COX3 OR CYCLOOXYGENASE  
L58 920 S L23 AND L24-L29,L31-L53,L56,L57

FILE 'REGISTRY' ENTERED AT 13:28:55 ON 13 OCT 2004

L59 7 S (VITAMIN A OR VITAMIN B OR VITAMIN C OR VITAMIN D OR VITAMIN  
L60 1 S A-LIPOIC ACID/CN  
L61 6 S (EICOSAPENTAENOIC ACID OR DOCOSAHEXAENOIC ACID)/CN  
L62 1 S GLUTATHIONE/CN  
L63 2 S (TAURINE OR N-ACETYL-L-CYSTEINE)/CN

FILE 'HCAPLUS' ENTERED AT 13:30:41 ON 13 OCT 2004

L64 264 S L58 AND ANTIOXIDANT?/CW  
 E ANTIOXIDANT/CT  
 L65 264 S L58 AND E12,E13,E16-E20,E23,E24,E24,E26,E27  
 E E20+ALL  
 E E2+ALL  
 L66 264 S L58 AND E5,E6  
 L67 476 S L58 AND (L59 OR VITAMIN() (A OR B OR C OR D OR "E") OR ASCORBI  
 L68 37 S L58 AND (L60 OR ALPHA LIPOIC ACID)  
 L69 24 S L58 AND (L61 OR EICOSAPENTAENOIC ACID OR DOCOSAHEXAENOIC ACID  
 E OMEGA 3/CT  
 E E7+ALL  
 L70 27 S L58 AND E2  
 L71 5789 S FATTY ACID?/CT (L) (N3 OR N 3 OR OMEGA 3 OR OMEGA3)  
 L72 30 S L58 AND L71  
 L73 525 S L64-L70,L72  
 L74 99 S L73 AND (L62,L63 OR GLUTATHION? OR TAURIN# OR N ACETYL L CYST  
 L75 103043 S EYE+OLD,NT,PFT,RT/CT OR EYE, DISEASE+OLD,NT,PFT,RT/CT  
 E EYE+ALL/CT  
 L76 185146 S E26+OLD,NT,PFT,RT OR E27+OLD,NT,PFT,RT OR E28+OLD,NT,PFT,RT  
 E EYE/CT  
 L77 941 S E57  
 L78 0 S E156  
 L79 24611 S E175,E176  
 L80 595 S E205  
 L81 3720 S E256,E257,E258  
 L82 2405 S E259,E267  
 L83 567 S L58 AND L75-L82  
 L84 355 S L83 AND L73  
 L85 80 S L84 AND L74  
 L86 5 S L85 AND (EYE? OR ?OCULAR? OR ?OPHTHALM? OR ?OPHTHALM?)  
 L87 22 S L58 AND (EYE? OR ?OCULAR? OR ?OPHTHALM? OR ?OPHTHALM?)  
 L88 19 S L87 AND L64-L73  
 L89 22 S L86-L88  
 L90 75 S L85 NOT L89  
 L91 47 S L90 NOT COSMETIC#/SC,SX,CW  
 L92 28 S L90 NOT L91  
 L93 1 S L1-L7 AND L58  
 L94 5 S L1-L7 AND L23  
 L95 4 S L94 NOT ASTHMA?  
 L96 25 S L93,L95,L89  
 L97 20 S L96 AND (PD<=20020123 OR PRD<=20020123 OR AD<=20020123)  
 L98 20 S L93,L95,L97  
 L99 5 S L96 NOT L98  
 L100 25 S L98,L99  
 L101 24 S L100 AND (EYE? OR ?OCULAR? OR VISION? OR OPHTHALM? OR OPHTHALM  
 L102 1 S L100 NOT L101  
 L103 7 S L100 AND ?INFLAM?  
 L104 5 S L100 AND (?ITIS OR ?ITIC)  
 L105 25 S L100-L104  
 L106 25 S L105 AND L1-L7,L17-L29,L31-L53,L56-L58,L64-L105  
 SEL HIT RN

FILE 'REGISTRY' ENTERED AT 13:49:06 ON 13 OCT 2004

L107 21 S E1-E21  
 L108 16 S L107 NOT (1405-87-4 OR 34787-01-4 OR 1695-77-8 OR 378-44-9 OR

FILE 'HCAPLUS' ENTERED AT 13:51:52 ON 13 OCT 2004

L109 178822 S L108  
 L110 507 S L109 AND L58  
 L111 20 S L110 AND L106  
 L112 5 S L106 NOT L111  
 SEL DN AN 3 5  
 L113 3 S L112 NOT E22-E27



L114 23 S L111,L113

=> fil reg

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STRUCTURE FILE UPDATES: 12 OCT 2004 HIGHEST RN 761381-83-3  
DICTIONARY FILE UPDATES: 12 OCT 2004 HIGHEST RN 761381-83-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d l108 tot ide can

L108 ANSWER 1 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 329900-75-6 REGISTRY

CN Synthetase, prostaglandin endoperoxide, 2 (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Arachidonate cyclooxygenase 2

CN COX-2

CN Cyclooxygenase 2

CN Prostaglandin endoperoxide H synthase-2

CN Prostaglandin endoperoxide synthase-2

CN Prostaglandin endoperoxide synthetase 2

CN Prostaglandin G/H synthase-2

CN Prostaglandin H synthase-2

MF Unspecified

CI MAN

SR CA

LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

DT.CA CAplus document type: Book; Conference; Dissertation; Journal; Patent

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC  
(Process); PRP (Properties); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
(Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); USES  
(Uses)

RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological  
study); PRP (Properties); USES (Uses)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

5160 REFERENCES IN FILE CA (1907 TO DATE)

7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

5209 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:266006

REFERENCE 2: 141:265962  
REFERENCE 3: 141:260745  
REFERENCE 4: 141:260542  
REFERENCE 5: 141:259823  
REFERENCE 6: 141:259332  
REFERENCE 7: 141:259318  
REFERENCE 8: 141:258560  
REFERENCE 9: 141:258557  
REFERENCE 10: 141:258554

L108 ANSWER 2 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 31272-50-1 REGISTRY

CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'S)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN  $\beta$ -Carotene-3,3'-diol, meso- (8CI)

OTHER NAMES:

CN (3R,3'S)-Zeaxanthin

CN meso-Zeaxanthin

FS STEREOSEARCH

MF C40 H56 O2

LC STN Files: BEILSTEIN\*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT,  
CHEMINFORMRX, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

DT.CA Caplus document type: Journal; Patent

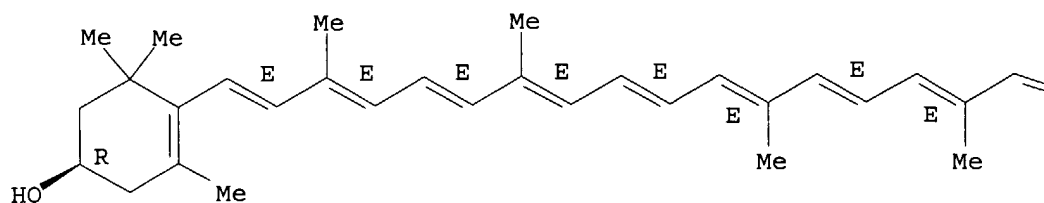
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PROC  
(Process); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); USES (Uses)

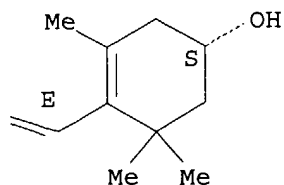
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP  
(Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
reagent)

Relative stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

34 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
34 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:144004

REFERENCE 2: 139:7022

REFERENCE 3: 138:238319

REFERENCE 4: 138:166821

REFERENCE 5: 137:275918

REFERENCE 6: 136:386274

REFERENCE 7: 135:316385

REFERENCE 8: 135:127221

REFERENCE 9: 135:46326

REFERENCE 10: 135:30424

L108 ANSWER 3 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 12001-76-2 REGISTRY

CN Vitamin B (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN Becotin

CN Becozym

CN Betalin

CN Vitamin B complex

CN Vitamin group B

MF Unspecified

CI COM, MAN

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO,  
CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMLIST, CIN, DDFU,  
DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA,  
MEDLINE, MSDS-OHS, PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL, VETU

DT.CA CAplus document type: Book; Conference; Dissertation; Journal; Patent;  
Report

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties);  
RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
(Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT

(Reactant or reagent); USES (Uses); NORL (No role in record)  
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); PROC (Process)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

3585 REFERENCES IN FILE CA (1907 TO DATE)

13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

3591 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:254557

REFERENCE 2: 141:242556

REFERENCE 3: 141:230304

REFERENCE 4: 141:224076

REFERENCE 5: 141:206173

REFERENCE 6: 141:206152

REFERENCE 7: 141:206149

REFERENCE 8: 141:204411

REFERENCE 9: 141:194961

REFERENCE 10: 141:194959

L108 ANSWER 4 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 11103-57-4 REGISTRY

CN Vitamin A (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Chocola A

CN Hydrovit A

CN LPK

CN Microvit A

CN Provitamin A

CN Rovimix A 500

DR 1341-18-0, 1406-67-3, 53637-36-8

MF Unspecified

CI COM, MAN

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, CA,  
CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMLIST, CIN, CSCHM, CSNB,  
HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, NIOSHTIC, PHAR, PIRA,  
PROMT, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA CAplus document type: Book; Conference; Dissertation; Journal; Patent;  
Report

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
(Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
(Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical  
study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP  
(Properties); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
(Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
(Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical

study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

16041 REFERENCES IN FILE CA (1907 TO DATE)

504 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

16062 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:266084

REFERENCE 2: 141:266083

REFERENCE 3: 141:262450

REFERENCE 4: 141:259914

REFERENCE 5: 141:259913

REFERENCE 6: 141:259829

REFERENCE 7: 141:259801

REFERENCE 8: 141:259796

REFERENCE 9: 141:259777

REFERENCE 10: 141:258350

L108 ANSWER 5 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 1406-18-4 REGISTRY

CN Vitamin E (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Aquasol E

CN Covitol F 1300

CN E-Mix 40

CN E-Mix 70L

CN Erevit forte

CN Evion

CN Fujimix E 20N

CN Hydrovit E forte

CN Irganox E 217

CN Irganox E 218

CN Juvela E

CN Juvela Food 500

CN MDE 6000

CN Palmvitee

CN Rocavit E

CN Rontex 201

CN Sunactive VE 202

CN Sunactive VE 720

DR 11105-14-9

MF Unspecified

CI COM, MAN

LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHM, DIOGENES, EMBASE, IFICDB, IFIPAT, IFIUDB, IMSCSEARCH, IPA, MEDLINE, MRCK\*, NAPRALERT, NIOSHTIC, PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL, VTB

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Book; Conference; Dissertation; Journal; Patent;

## Report

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

19669 REFERENCES IN FILE CA (1907 TO DATE)

290 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

19709 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:266055

REFERENCE 2: 141:266011

REFERENCE 3: 141:265597

REFERENCE 4: 141:265589

REFERENCE 5: 141:265588

REFERENCE 6: 141:264811

REFERENCE 7: 141:262450

REFERENCE 8: 141:261809

REFERENCE 9: 141:259914

REFERENCE 10: 141:259912

L108 ANSWER 6 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 1406-16-2 REGISTRY

CN Vitamin D (8CI, 9CI) (CA INDEX NAME)

MF Unspecified

CI COM, MAN

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMLIST, CIN, CSNB, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS\*, TOXCENTER, USPAT2, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Book; Conference; Dissertation; Journal; Patent; Report

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); MSC (Miscellaneous); PREP

(Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

10944 REFERENCES IN FILE CA (1907 TO DATE)

858 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

10960 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:259914

REFERENCE 2: 141:259912

REFERENCE 3: 141:259821

REFERENCE 4: 141:259818

REFERENCE 5: 141:259796

REFERENCE 6: 141:259779

REFERENCE 7: 141:259776

REFERENCE 8: 141:259772

REFERENCE 9: 141:258357

REFERENCE 10: 141:243340

L108 ANSWER 7 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 1200-22-2 REGISTRY

CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2-Dithiolane-3-pentanoic acid, (R)-

CN 1,2-Dithiolane-3-valeric acid, (+)- (8CI)

OTHER NAMES:

CN (R)-(+)- $\alpha$ -Lipoic acid

CN (R)- $\alpha$ -Lipoic acid

CN (R)-Lipoic acid

CN  $\alpha$ -(+)-Lipoic acid

CN  $\alpha$ -Lipoic acid

CN d-Thioctic acid

CN Lipoic acid

CN R-(+)-Thioctic acid

CN Tiobec

FS STEREOSEARCH

MF C8 H14 O2 S2

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DIOGENES, EMBASE, HODOC\*, IFICDB, IFIUDB, IMSDRUGNEWS, IMSRESEARCH, IPA, MEDLINE, MRCK\*, NAPRALERT, PROMT, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

DT.CA Caplus document type: Conference; Dissertation; Journal; Patent; Report

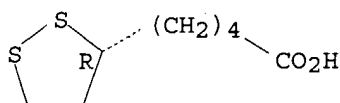
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation); PRP (Properties); USES (Uses)

Absolute stereochemistry. Rotation (+).



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

1212 REFERENCES IN FILE CA (1907 TO DATE)  
 61 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1216 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:260437

REFERENCE 2: 141:259817

REFERENCE 3: 141:256986

REFERENCE 4: 141:242661

REFERENCE 5: 141:240725

REFERENCE 6: 141:236215

REFERENCE 7: 141:235723

REFERENCE 8: 141:212758

REFERENCE 9: 141:201501

REFERENCE 10: 141:195281

L108 ANSWER 8 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 616-91-1 REGISTRY

CN L-Cysteine, N-acetyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cysteine, N-acetyl-, L- (6CI, 8CI)

OTHER NAMES:

CN (S)-N-Acetylcysteine

CN Acetylcysteine

CN Airbron

CN Broncholysin

CN Broncholysin (mucolytic)

CN Brunac

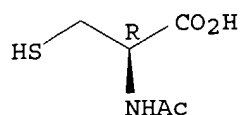
CN Exomuc

CN Fabrol



CN Fluatox  
 CN Fluibiotic  
 CN Fluimicil  
 CN Fluimicil Infantil  
 CN Fluimucetin  
 CN Fluimucil  
 CN Fluprowit  
 CN L-Acetylcysteine  
 CN L-N-Acetylcysteine  
 CN Mercapturic acid  
 CN Mercapturic acid, (R)-  
 CN Muco Sanigen  
 CN Mucocedyl  
 CN Mucofilin  
 CN Mucolator  
 CN Mucolyticum  
 CN Mucolyticum-Lappe  
 CN Mucolytikum Lappe  
 CN Mucomyst  
 CN Mucosolvin  
 CN Mucret  
 CN N-Acetyl- (R) -cysteine  
 CN N-Acetyl-L-cysteine  
 CN N-Acetylcysteine  
 CN N $\alpha$ -Acetylcysteine  
 CN Neo-Fluimucil  
 CN NSC 111180  
 CN Parvolex  
 CN Respaire  
 CN Tixair  
 FS STEREOSEARCH  
 DR 7696-05-1  
 MF C5 H9 N O3 S  
 CI COM  
 LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*,  
 BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS,  
 CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB,  
 DDFU, DIOGENES, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT,  
 IFIUDB, IMSCOSEARCH, IMSDRUGNEWS, IMSRESEARCH, IPA, MEDLINE, MRCK\*,  
 MSDS-OHS, NIOSHTIC, PHAR, PROMT, PROUSDDR, PS, RTECS\*, SPECINFO,  
 SYNTHLINE, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 DT.CA CAPLUS document type: Book; Conference; Dissertation; Journal; Patent;  
 Report  
 RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
 FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses); NORL (No role in record)  
 RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
 study); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP  
 (Properties); RACT (Reactant or reagent); USES (Uses)  
 RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
 study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses); NORL (No role in record)  
 RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical  
 study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5463 REFERENCES IN FILE CA (1907 TO DATE)  
 234 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 5481 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 28 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:265990  
 REFERENCE 2: 141:261009  
 REFERENCE 3: 141:256777  
 REFERENCE 4: 141:255686  
 REFERENCE 5: 141:255383  
 REFERENCE 6: 141:254535  
 REFERENCE 7: 141:254483  
 REFERENCE 8: 141:254114  
 REFERENCE 9: 141:254024  
 REFERENCE 10: 141:253204

L108 ANSWER 9 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 514-78-3 REGISTRY

CN  $\beta,\beta$ -Carotene-4,4'-dione (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN  $\beta$ -Carotene-4,4'-dione (6CI)

CN  $\beta$ -Carotene-4,4'-dione, all-trans- (8CI)

OTHER NAMES:

CN 4,4'-Diketo- $\beta$ -carotene

CN 4,4'-Dioxo- $\beta$ -carotene

CN all-trans-Canthaxanthin

CN C.I. 40850

CN C.I. Food Orange 8

CN Canthaxanthin

CN Canthaxanthine

CN Carophyll red

CN E 161g

CN Food Orange 8

CN Lucantin Red

CN NSC 374110

CN Roxanthin Red 10

FS STEREOSEARCH

DR 7548-82-5

MF C40 H52 O2

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHM, CSNB, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, PROMT, PROUSDDR, PS,

RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL, VETU

(\*File contains numerically searchable property data)

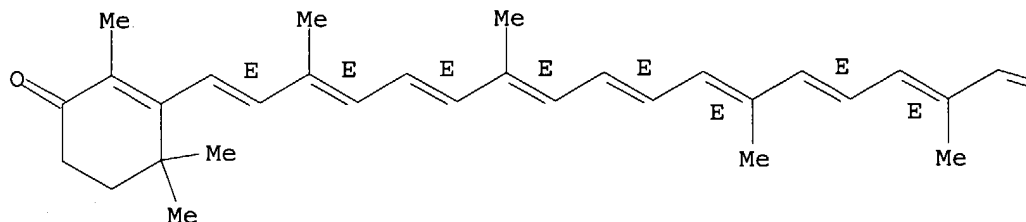
Other Sources: DSL\*\*, EINECS\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

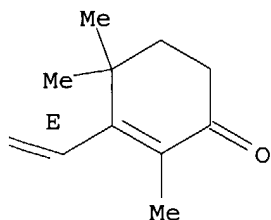
DT.CA CAPLUS document type: Conference; Dissertation; Journal; Patent; Report  
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties);  
RACT (Reactant or reagent); USES (Uses); NORL (No role in record)  
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); PREP (Preparation); PROC (Process); USES (Uses)  
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP  
(Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
reagent); USES (Uses); NORL (No role in record)  
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical  
study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU  
(Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
(Reactant or reagent); USES (Uses)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1445 REFERENCES IN FILE CA (1907 TO DATE)  
23 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
1447 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
45 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:265245  
REFERENCE 2: 141:259825  
REFERENCE 3: 141:242306  
REFERENCE 4: 141:237745  
REFERENCE 5: 141:205971

REFERENCE 6: 141:205700

REFERENCE 7: 141:189921

REFERENCE 8: 141:173334

REFERENCE 9: 141:171133

REFERENCE 10: 141:156158

L108 ANSWER 10 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 472-61-7 REGISTRY

CN  $\beta$ , $\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN  $\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, all-trans- (8CI)

CN Astaxanthin (6CI)

OTHER NAMES:

CN (3S,3'S)-all-trans-Astaxanthin

CN (3S,3'S)-Astaxanthin

CN (3S,3'S)-Astaxanthin

CN all-trans-Astaxanthin

CN Astaxanthin, all-trans-

CN BioAstin

CN BioAstin oleoresin

CN Carophyll Pink

CN Lucantin Pink

CN Natupink

CN Ovoester

CN trans-Astaxanthin

FS STEREOSEARCH

DR 346585-67-9

MF C40 H52 O4

CI COM

LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, PROMT, SPECINFO, TOXCENTER, USPAT2, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA CAplus document type: Book; Conference; Dissertation; Journal; Patent; Report

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

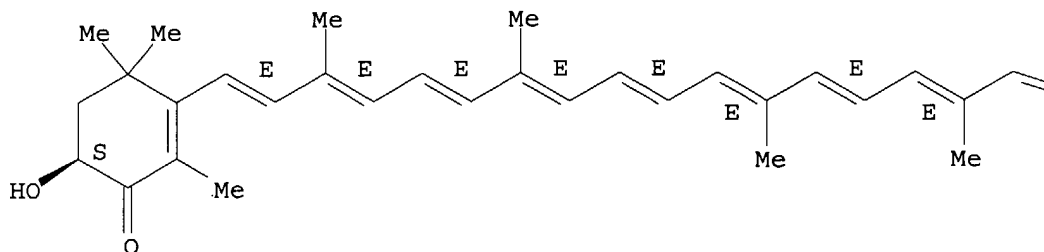
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

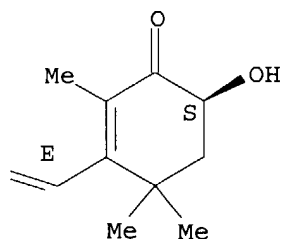
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1902 REFERENCES IN FILE CA (1907 TO DATE)  
 233 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 1904 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 44 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

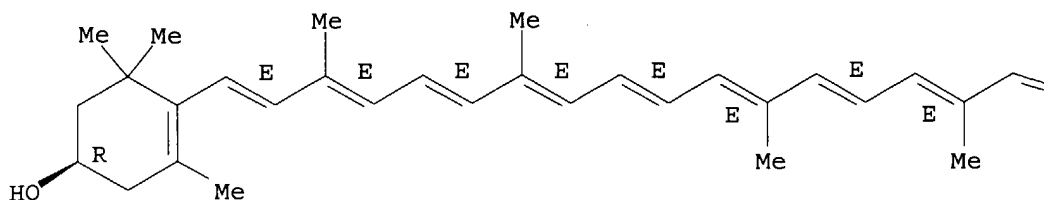
REFERENCE 1: 141:259825  
 REFERENCE 2: 141:259391  
 REFERENCE 3: 141:242641  
 REFERENCE 4: 141:242552  
 REFERENCE 5: 141:242454  
 REFERENCE 6: 141:242306  
 REFERENCE 7: 141:237745  
 REFERENCE 8: 141:224229  
 REFERENCE 9: 141:224036  
 REFERENCE 10: 141:221893

L108 ANSWER 11 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 144-68-3 REGISTRY  
 CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN  $\beta$ -Carotene-3,3'-diol, (3R,3'R)-all-trans- (6CI, 8CI)

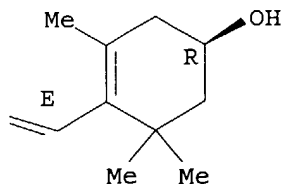
CN Zeaxanthin (7CI)  
 OTHER NAMES:  
 CN (3R,3'R)-Zeaxanthin  
 CN all-trans-Anchovyxanthin  
 CN all-trans-Zeaxanthin  
 CN Anchovyxanthin  
 CN Anchovyxanthin, all-trans-  
 CN Xanthophyll 3  
 CN Zeaxanthin, all-trans-  
 CN Zeaxanthol  
 FS STEREOSEARCH  
 DR 32638-35-0, 34182-33-7  
 MF C40 H56 O2  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, DDFU, DRUGU, EMBASE, HODOC\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, NAPRALERT, PROMT, SPECINFO, TOXCENTER, USPAT2, USPATFULL, VETU  
 (\*File contains numerically searchable property data)  
 Other Sources: EINECS\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 DT.CA CAPLUS document type: Conference; Dissertation; Journal; Patent; Report  
 RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)  
 RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); OCCU (Occurrence); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
 RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)  
 RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.  
 Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3229 REFERENCES IN FILE CA (1907 TO DATE)  
71 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
3233 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
36 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:265193

REFERENCE 2: 141:259914

REFERENCE 3: 141:259868

REFERENCE 4: 141:259558

REFERENCE 5: 141:257613

REFERENCE 6: 141:255280

REFERENCE 7: 141:242565

REFERENCE 8: 141:242560

REFERENCE 9: 141:242521

REFERENCE 10: 141:240057

L108 ANSWER 12 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 117-39-5 REGISTRY

CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI)  
(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Flavone, 3,3',4',5,7-pentahydroxy- (7CI, 8CI)

CN Flavone, 3,4',5,5',7-pentahydroxy- (6CI)

OTHER NAMES:

CN 3,3',4',5,7-Pentahydroxyflavone

CN 3,5,7,3',4'-Pentahydroxyflavone

CN C.I. 75670

CN C.I. Natural Yellow 10

CN Cyanidelonon 1522

CN Meletin

CN NSC 57655

CN NSC 9219

CN Quercetin

CN Quercetine

CN Quercetol

CN Quercitin

CN Quertin

CN Quertine

CN Sophoretin

CN Xanthaurine

FS 3D CONCORD

DR 73123-10-1, 74893-81-5

MF C15 H10 O7

CI COM

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*,  
BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS,  
CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU,  
DETERM\*, DIOGENES, DRUGU, EMBASE, HODOC\*, HSDB\*, IFICDB, IFIPAT,  
IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PHAR, PIRA,  
PROMT, PROUSDDR, RTECS\*, SPECINFO, TOXCENTER, TULSA, USPAT2, USPATFULL,

## VETU

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

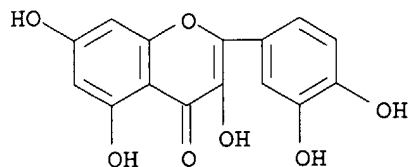
DT.CA CAPLUS document type: Conference; Dissertation; Journal; Patent; Report

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

9906 REFERENCES IN FILE CA (1907 TO DATE)

694 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

9947 REFERENCES IN FILE CAPLUS (1907 TO DATE)

2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:270640

REFERENCE 2: 141:265677

REFERENCE 3: 141:265670

REFERENCE 4: 141:260022

REFERENCE 5: 141:259903

REFERENCE 6: 141:259672

REFERENCE 7: 141:259655

REFERENCE 8: 141:259651

REFERENCE 9: 141:259649

REFERENCE 10: 141:259540

L108 ANSWER 13 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 98-92-0 REGISTRY

CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:



CN Nicotinamide (8CI)

OTHER NAMES:

CN  $\beta$ -Pyridinecarboxamide  
CN 3-(Aminocarbonyl)pyridine  
CN 3-Amidopyridine  
CN 3-Carbamoylpyridine  
CN 3-Pyridinecarboxylic acid amide  
CN Aminicotin  
CN Benicot  
CN Delonin Amide  
CN Dipearyl  
CN m-(Aminocarbonyl)pyridine  
CN NAM  
CN Niacinamide  
CN Niavit PP  
CN Nicamina  
CN Nicamindon  
CN Nicasir  
CN Nicobion  
CN Nicofort  
CN Nicosan 2  
CN Nicosylamide  
CN Nicotilamide  
CN Nicotine acid amide  
CN Nicotinic acid amide  
CN Nicotinic amide  
CN Nicotylamide  
CN Nicovit  
CN Nicovitina  
CN Nictoamide  
CN Niocinamide  
CN Niozymin  
CN NSC 13128  
CN NSC 27452  
CN Papulex  
CN Pelmin  
CN Pelmine  
CN Pelonin amide  
CN Vi-Nicotyl  
CN Vitamin B  
CN Vitamin B3  
FS 3D CONCORD  
DR 123574-63-0, 37321-14-5, 78731-47-2  
MF C6 H6 N2 O  
CI COM

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*,  
BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS,  
CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM,  
CSNB, DDFU, DETHERM\*, DIOGENES, DRUGU, EMBASE, GMELIN\*, HODOC\*, HSDB\*,  
IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT,  
NIOSHTIC, PDLCOM\*, PHAR, PIRA, PROMT, PROUSDDR, PS, RTECS\*, SPECINFO,  
TOXCENTER, USAN, USPAT2, USPATFULL, VTB

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA CAplus document type: Book; Conference; Dissertation; Journal; Patent;  
Report

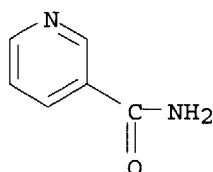
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
(Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
(Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical  
study); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation);

PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

8374 REFERENCES IN FILE CA (1907 TO DATE)  
 281 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 8387 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:270365  
 REFERENCE 2: 141:265949  
 REFERENCE 3: 141:265608  
 REFERENCE 4: 141:265602  
 REFERENCE 5: 141:265598  
 REFERENCE 6: 141:265581  
 REFERENCE 7: 141:259705  
 REFERENCE 8: 141:256986  
 REFERENCE 9: 141:255648  
 REFERENCE 10: 141:254099

L108 ANSWER 14 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 70-18-8 REGISTRY

CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Glutathione (8CI)

CN Glycine, N-(N-L-γ-glutamyl-L-cysteinyl)-

OTHER NAMES:

CN γ-Glutamylcysteinylglycine

CN γ-L-Glutamyl-L-cysteinylglycine

CN 13: PN: CN1314415 PAGE: 8 claimed sequence

CN 99: PN: WO2004025259 PAGE: 57 claimed sequence

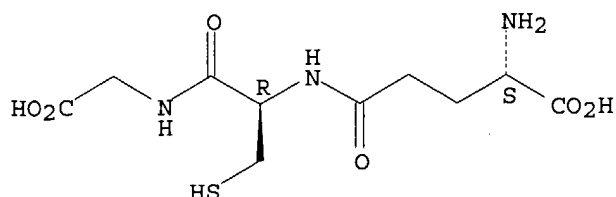
CN Agifutol S

CN Copren

CN Deltathione

CN Glutathion  
 CN Glutathione-SH  
 CN Glutide  
 CN Glutinal  
 CN GSH  
 CN Isethion  
 CN L-Glutathione  
 CN N-(N-L-γ-Glutamyl-L-cysteinyl)glycine  
 CN Neuthion  
 CN Reduced glutathione  
 CN Tathion  
 CN Tathione  
 CN Triptide  
 FS STEREOSEARCH  
 MF C10 H17 N3 O6 S  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,  
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU,  
 EMBASE, GMELIN\*, HODOC\*, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA,  
 MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS\*,  
 SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU,  
 VTB  
 (\*File contains numerically searchable property data)  
 Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
 (\*\*Enter CHEMLIST File for up-to-date regulatory information)  
 DT.CA CAplus document type: Book; Conference; Dissertation; Journal; Patent;  
 Preprint; Report  
 RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
 FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses); NORL (No role in record)  
 RLD.P Roles for non-specific derivatives from patents: ANST (Analytical  
 study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses)  
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 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses); NORL (No role in record)  
 RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical  
 study); BIOL (Biological study); CMBI (Combinatorial study); FORM  
 (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC  
 (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

36854 REFERENCES IN FILE CA (1907 TO DATE)  
 1476 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 36931 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:266048  
REFERENCE 2: 141:265837  
REFERENCE 3: 141:265228  
REFERENCE 4: 141:260904  
REFERENCE 5: 141:260592  
REFERENCE 6: 141:259874  
REFERENCE 7: 141:259844  
REFERENCE 8: 141:259817  
REFERENCE 9: 141:259816  
REFERENCE 10: 141:259388

L108 ANSWER 15 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 68-26-8 REGISTRY

CN Retinol (9CI) (CA INDEX NAME)

OTHER NAMES:

CN (all-E)-3,7-Dimethyl-9-(2,6,6-trimethyl-1-cyclohexen-1-yl)-2,4,6,8-  
nonatetraen-1-ol  
CN  $\beta$ -Retinol  
CN 2,4,6,8-Nonatetraen-1-ol, 3,7-dimethyl-9-(2,6,6-trimethyl-1-cyclohexen-1-  
yl)-, (all-E)-  
CN A-Mulsal  
CN A-Sol  
CN A-Vi-Pel  
CN A-Vitan  
CN Acon  
CN Afaxin  
CN Agiolan  
CN Agoncal  
CN Alcovit A  
CN all-trans-Retinol  
CN all-trans-Retinyol alcohol  
CN all-trans-Vitamin A  
CN all-trans-Vitamin A alcohol  
CN all-trans-Vitamin A1  
CN Alphalin  
CN Alphasterol  
CN Anatola  
CN Anatola A  
CN Anti-Infective vitamin  
CN Antixerophthalmic vitamin  
CN Aoral  
CN Apexol  
CN Apostavit  
CN Aquasol A Parenteral  
CN Aquasynth  
CN Atav  
CN Avibon  
CN Avita  
CN Avitol  
CN Axerol  
CN Axerophthol  
CN Bentavit A  
CN Biosterol

CN Cylasphere  
 CN Disatabs Tabs  
 CN Dofsol  
 CN Dohyfral A  
 CN Epiteliol  
 CN Hi-A-Vita  
 CN Lard Factor  
 CN Myvpack  
 CN Nio-A-Let  
 CN NSC 122759  
 CN Oleovitamin a  
 CN Ophthalmamin  
 CN Plivit A  
 CN Prepalin

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for  
 DISPLAY

FS STEREOSEARCH

DR 13123-33-6, 17104-91-5, 5979-23-7

MF C20 H30 O

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
 BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,  
 CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM\*, DIOGENES,  
 DRUGU, EMBASE, GMELIN\*, HSDB\*, IFICDB, IFIPAT, IFIUDB, IPA, MRCK\*,  
 MSDS-OHS, NAPRALERT, NIOSHTIC, PHAR, PIRA, PROMT, PS, RTECS\*, SPECINFO,  
 SYNTHLINE, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Book; Conference; Dissertation; Journal; Patent;  
 Report

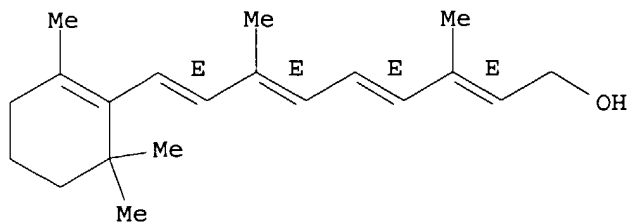
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
 FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation);  
 PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES  
 (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical  
 study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU  
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 (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
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 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical  
 study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC  
 (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process);  
 PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

10224 REFERENCES IN FILE CA (1907 TO DATE)  
723 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
10249 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
61 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:265951  
REFERENCE 2: 141:265608  
REFERENCE 3: 141:259921  
REFERENCE 4: 141:259904  
REFERENCE 5: 141:259801  
REFERENCE 6: 141:256273  
REFERENCE 7: 141:255638  
REFERENCE 8: 141:242561  
REFERENCE 9: 141:242560  
REFERENCE 10: 141:242555

L108 ANSWER 16 OF 16 REGISTRY COPYRIGHT 2004 ACS on STN

RN 50-81-7 REGISTRY

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN (+)-Ascorbic acid  
CN 3-keto-L-Gulofuranolactone  
CN 3-Oxo-L-gulofuranolactone  
CN Adenex  
CN Allercorb  
CN Antiscorbic vitamin  
CN Antiscorbutic vitamin  
CN Ascoltin  
CN Ascorbajen  
CN Ascorbic acid  
CN Ascorbicap  
CN Ascorbutina  
CN Ascorin  
CN Ascorteal  
CN Ascorvit  
CN C-Quin  
CN C-Vimin  
CN Cantan  
CN Cantaxin  
CN Catavin C  
CN Ce-Mi-Lin  
CN Ce-Vi-Sol  
CN Cebicure  
CN Cebion  
CN Cebion,  $\gamma$ -lactone  
CN Cebione  
CN Cecon  
CN Cegiolan  
CN Ceglion  
CN Ceklin  
CN Celaskon  
CN Celin  
CN Cell C  
CN Cemagyl

CN Cenetone  
 CN Cereon  
 CN Cergona  
 CN Cescorbat  
 CN Cetamid  
 CN Cetane  
 CN Cetane-Caps TC  
 CN Cetebe  
 CN Cetemican  
 CN Cevalin  
 CN Cevatine  
 CN Cevex  
 CN Cevimin  
 CN Cevital  
 CN Cevitamic acid  
 CN Cevitamin

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for  
 DISPLAY

FS STEREOSEARCH

DR 623158-95-2, 56533-05-2, 57304-74-2, 57606-40-3, 56172-55-5, 129940-97-2,  
 14536-17-5, 50976-75-5, 154170-90-8, 89924-69-6, 30208-61-8, 259133-78-3

MF C6 H8 O6

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS,  
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,  
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU,  
 DETHERM\*, DIOGENES, DIPPR\*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,  
 ENCOMPPAT, ENCOMPPAT2, GMELIN\*, HODOC\*, HSDB\*, IFICDB, IFIPAT, IFIUDB,  
 IMSCOSEARCH, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC,  
 PDLCOM\*, PHAR, PIRA, PROMT, PS, RTECS\*, SPECINFO, SYNTHLINE, TOXCENTER,  
 TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Book; Conference; Dissertation; Journal; Patent;  
 Preprint; Report

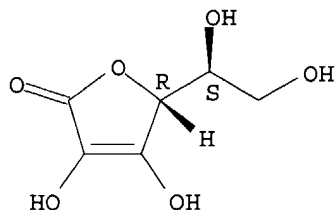
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
 FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical  
 study); BIOL (Biological study); FORM (Formation, nonpreparative); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
 study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU  
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
 (Reactant or reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical  
 study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC  
 (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process);  
 PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

71134 REFERENCES IN FILE CA (1907 TO DATE)  
1415 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
71234 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 141:270682  
REFERENCE 2: 141:270676  
REFERENCE 3: 141:270669  
REFERENCE 4: 141:270599  
REFERENCE 5: 141:270589  
REFERENCE 6: 141:270532  
REFERENCE 7: 141:270531  
REFERENCE 8: 141:267273  
REFERENCE 9: 141:267258  
REFERENCE 10: 141:266094

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FILE COVERS 1907 - 13 Oct 2004 VOL 141 ISS 16  
FILE LAST UPDATED: 12 Oct 2004 (20041012/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.



=> d all hitstr tot 1114

L114 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2004:331590 HCAPLUS  
 DN 140:327125  
 ED Entered STN: 23 Apr 2004  
 TI Anti-inflammatory formulations  
 IN Haines, David; Mahmoud, Fadia F.; Pratt, Steven  
 G.; Wise, John  
 PA USA  
 SO U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Ser. No. 345,856.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM A61K035-78  
 ICS A61K038-05; A61K031-202; A61K031-015  
 NCL 424729000; 514018000; 514763000; 514560000; 424766000; 424756000;  
 424736000; 514027000; 424765000; 424732000  
 CC 63-6 (Pharmaceuticals)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004076691	A1	20040422	US 2003-621802	20030716 <--
	US 2003170328	A1	20030911	US 2003-345856	20030116 <--
PRAI	US 2002-350298P	P	20020116	<--	
	US 2003-345856	A2	20030116	<--	

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004076691	ICM	A61K035-78
	ICS	A61K038-05; A61K031-202; A61K031-015
	NCL	424729000; 514018000; 514763000; 514560000; 424766000; 424756000; 424736000; 514027000; 424765000; 424732000
US 2004076691	ECLA	A61K031/07; A61K031/122; A61K031/203; A61K031/365; A61K031/366; A61K031/375; A61K031/495M; A61K035/78 <--

AB The invention features compns. containing an antioxidant and/or a ginkgolide compound to reduce **inflammation**. Combination drug therapy using antioxidant and/or a ginkgolide compound with an **anti-inflammatory** agent reduces adverse side effects associated with many known **anti-inflammatory** agents.

ST ginkgolide **antiinflammatory** antioxidant formulation

IT **Tea products**  
 (beverages, green; ginkgolide anti-inflammatory formulations)

IT **Flavonoids**  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (bioflavonoids, citrus; ginkgolide anti-inflammatory formulations)

IT **Bilberry**  
 (extract; ginkgolide anti-inflammatory formulations)

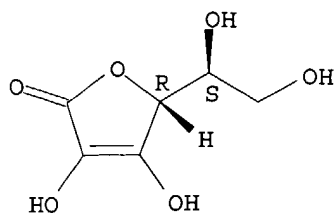
IT **Anti-inflammatory agents**  
 (ginkgolide anti-inflammatory formulations)

IT **Carotenes, biological studies**  
 Trace elements, biological studies  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (ginkgolide anti-inflammatory formulations)

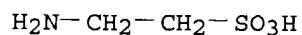
IT **Fats and Glyceridic oils, biological studies**  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (grape seed, extract; ginkgolide anti-

- inflammatory formulations)
- IT **Eye, disease**  
(inflammation; ginkgolide anti-inflammatory formulations)
- IT **Eye, disease**  
(macula, degeneration; ginkgolide anti-inflammatory formulations)
- IT **Phenols, biological studies**  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(polyphenols, nonpolymeric; ginkgolide anti-inflammatory formulations)
- IT **Fatty acids, biological studies**  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(polyunsatd., n-3; ginkgolide anti-inflammatory formulations)
- IT **Curcuma longa**  
(root powder; ginkgolide anti-inflammatory formulations)
- IT **Antioxidants**  
(vitamins; ginkgolide anti-inflammatory formulations)
- IT 50-81-7, Vitamin c, biological studies  
107-35-7, Taurine 117-39-5, Quercetin  
144-68-3, Zeaxanthin 472-61-7,  
Astaxanthin 616-91-1, N-Acetyl-  
L-cysteine 1200-22-2,  $\alpha$   
Lipoic acid 1406-16-2, Vitamin  
d 11103-57-4, Vitamin a  
12001-76-2, Vitamin b  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(ginkgolide anti-inflammatory formulations)
- IT 329900-75-6, COX-2  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; ginkgolide anti-inflammatory formulations)
- IT 70-18-8, Glutathione, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(precursors; ginkgolide anti-inflammatory formulations)
- IT 50-81-7, Vitamin c, biological studies  
107-35-7, Taurine 117-39-5, Quercetin  
144-68-3, Zeaxanthin 472-61-7,  
Astaxanthin 616-91-1, N-Acetyl-  
L-cysteine 1200-22-2,  $\alpha$   
Lipoic acid 1406-16-2, Vitamin  
d 11103-57-4, Vitamin a  
12001-76-2, Vitamin b  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(ginkgolide anti-inflammatory formulations)
- RN 50-81-7 HCAPLUS  
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

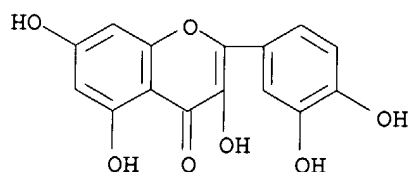
Absolute stereochemistry.



RN 107-35-7 HCAPLUS  
 CN Ethanesulfonic acid, 2-amino- (9CI) (CA INDEX NAME)



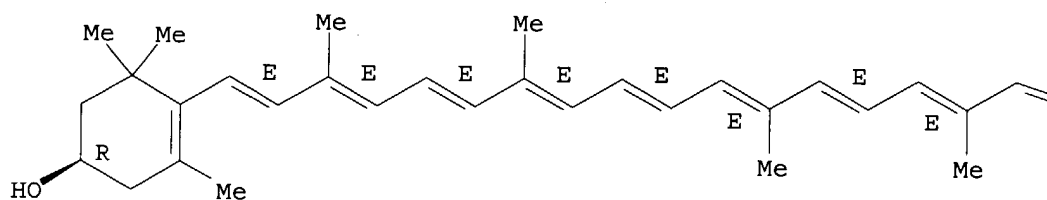
RN 117-39-5 HCAPLUS  
 CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI)  
 (CA INDEX NAME)



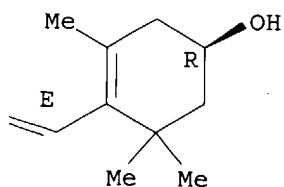
RN 144-68-3 HCAPLUS  
 CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

PAGE 1-A



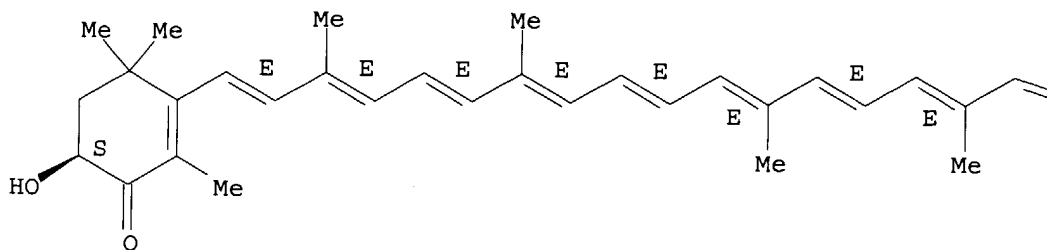
PAGE 1-B



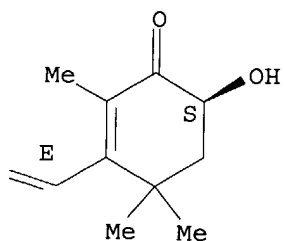
RN 472-61-7 HCAPLUS  
 CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

PAGE 1-A

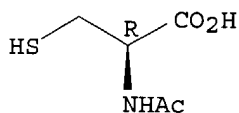


PAGE 1-B



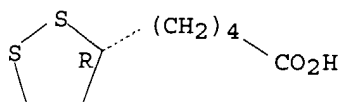
RN 616-91-1 HCAPLUS  
 CN L-Cysteine, N-acetyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1200-22-2 HCAPLUS  
 CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 1406-16-2 HCAPLUS  
 CN Vitamin D (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11103-57-4 HCAPLUS  
 CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 12001-76-2 HCAPLUS  
 CN Vitamin B (8CI, 9CI) (CA INDEX NAME)

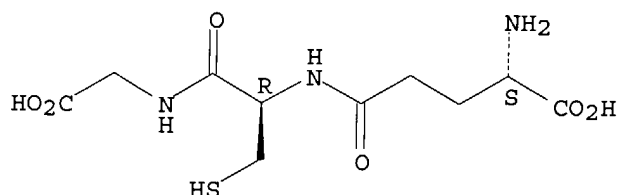
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 329900-75-6, COX-2  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inhibitors; ginkgolide anti-inflammatory formulations)  
 RN 329900-75-6 HCAPLUS  
 CN Synthetase, prostaglandin endoperoxide, 2 (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 70-18-8, Glutathione, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (precursors; ginkgolide anti-inflammatory formulations)  
 RN 70-18-8 HCAPLUS  
 CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L114 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2004:289520 HCAPLUS  
 DN 140:308996  
 ED Entered STN: 08 Apr 2004  
 TI Kits and method for treatment or prevention of dark circles or swelling  
 around the eyes  
 IN Shigeta, Yoko; Okada, Kaori; Ono, Erika; Sakurai, Akihito  
 PA FancI Corporation, Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM A61K035-78  
 ICS A61K007-00; A61K007-48; A61K031-015; A61K031-19; A61K031-197;  
 A61K031-355; A61K031-4415; A61K031-455; A61K031-51; A61K031-525;  
 A61K031-685; A61K031-7048; A61P017-00  
 CC 62-4 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 17

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004107245	A2	20040408	JP 2002-270734	20020917
PRAI JP 2002-270734		20020917		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004107245	ICM	A61K035-78
	ICS	A61K007-00; A61K007-48; A61K031-015; A61K031-19; A61K031-197; A61K031-355; A61K031-4415; A61K031-455; A61K031-51; A61K031-525; A61K031-685; A61K031-7048; A61P017-00
JP 2004107245	FTERM	4C083/AA111; 4C083/AA112; 4C083/AB032; 4C083/AC021; 4C083/AC022; 4C083/AC122; 4C083/AC172; 4C083/AC242; 4C083/AC352; 4C083/AC422; 4C083/AC581; 4C083/AC851; 4C083/AD092; 4C083/AD172; 4C083/AD352; 4C083/AD391; 4C083/AD571; 4C083/AD572; 4C083/AD631; 4C083/AD661; 4C083/CC02; 4C083/CC05; 4C083/DD31; 4C083/EE12; 4C086/AA01; 4C086/AA02; 4C086/BA09; 4C086/BC18;

4C086/BC19; 4C086/CB09; 4C086/EA11; 4C086/HA10;  
 4C086/MA02; 4C086/MA04; 4C086/MA52; 4C086/MA63;  
 4C086/ZA89; 4C086/ZC02; 4C086/ZC22; 4C088/AB12;  
 4C088/AB19; 4C088/AB26; 4C088/AB34; 4C088/AB40;  
 4C088/AB52; 4C088/AB59; 4C088/AB77; 4C088/AB86;  
 4C088/BA08; 4C088/CA03; 4C088/MA52; 4C088/MA63;  
 4C088/NA14; 4C088/ZA89; 4C088/ZC02; 4C088/ZC22;  
 4C206/DA02; 4C206/FA45; 4C206/HA10; 4C206/MA02;  
 4C206/MA04; 4C206/MA72; 4C206/MA83; 4C206/NA14;  
 4C206/ZA89; 4C206/ZC02; 4C206/ZC22

- AB The kits comprise percutaneously applied formulations containing plants selected from *Coix lacryma-jobi*, *Aloe*, *Taraxacum officinale*, *Cnidium officinale*, *Morus alba*, *Panax ginseng*, and hop or their exts., **vitamin E**, plants selected from almond, peanut, *Perilla frutescens*, and pumpkin or their exts., intercellular lipids of plants, plant squalane, and/or lecithins (derivs.) and oral formulations containing **vitamin E**, carotenoids, vitamin B1, vitamin B12, vitamin B6, folic acid, niacin, valerian (exts.), hop (exts.),  $\gamma$ -aminobutyric acid (derivs.), anthocyanins (derivs.), plants containing anthocyanins (derivs.) or their exts., and/or Fe. Women were orally administered with 2 soft capsules (160 mg/capsule) containing **blueberry** extract 38,  $\beta$ -carotene 2, vitamin B1 0.3, vitamin B6 0.6, vitamin B12 0.0006, *Perilla frutescens* oil 55, and beeswax 4 weight% once a day and treated with a cosmetic gel composition containing glycerin 5, 1,3-butylene glycol 6, xanthan gum 0.3, *C. lacryma-jobi* extract 0.1, *Aloe* extract 0.1, almond extract 0.1, H2O 60.4, squalane 20, glycerin monostearate 4, polyoxyethylene stearate 2, and behenyl alc. 2 weight% twice a day for 8 wk. The combined treatment was effective for removal of dark circles and swelling around the **eyes**.
- ST skin conditioner oral topical plant vitamin; anthocyanin iron aminobutyrate carotenoid skin conditioner
- IT Cosmetics  
 (conditioners; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)
- IT **Blueberry**  
 (exts.; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)
- IT *Oryza sativa*  
 (germ, exts.; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)
- IT Lecithins  
 RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hydrogenated; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)
- IT Lecithins  
 RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
 (hydroxylated; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)
- IT *Aloe* (genus)  
*Arachis hypogaea*  
*Cnidium officinale*  
*Coix lacryma-jobi*  
 Dandelion  
 Health food  
 Human

**Humulus**

Morus alba

Panax pseudoginseng

Perilla frutescens

Prunus amygdalus

Squash (Cucurbita)

Valeriana

(kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT Anthocyanins

**Carotenes, biological studies**

Lecithins

RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT Drug delivery systems

(oral; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT Sterols

RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(phytosterols, oleate; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT Lipids, biological studies

RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(plant intercellular; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT Fats and Glyceridic oils, biological studies

RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(rice bran; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT Drug delivery systems

(topical; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT 111-01-3, Squalane

RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(from plants; kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT 59-43-8, Vitamin B1, biological studies 112-80-1D, Oleic acid, esters with phytosterols 7235-40-7,  $\beta$ -Carotene

RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT 1406-18-4, Vitamin E

RL: BSU (Biological study, unclassified); COS (Cosmetic use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT 56-12-2,  $\gamma$ -Aminobutyric acid, biological studies 59-30-3, Folic acid, biological studies 59-67-6, Niacin, biological studies 68-19-9, Vitamin B12 98-92-0, Nicotinamide 7439-89-6, Iron, biological studies 8059-24-3, Vitamin B6

RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

IT **1406-18-4, Vitamin E**

RL: BSU (Biological study, unclassified); COS (Cosmetic use); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

RN 1406-18-4 HCAPLUS

CN Vitamin E (9CI) (CA INDEX NAME)

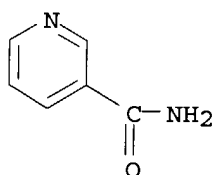
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **98-92-0, Nicotinamide**

RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
(kits containing topical and oral formulations and method for treatment or prevention of dark circles or swelling around the **eyes**)

RN 98-92-0 HCAPLUS

CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



L114 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:282819 HCAPLUS

DN 140:309380

ED Entered STN: 07 Apr 2004

TI Formulation for enhancement of antioxidant potency of **vitamin E** compounds

IN Udell, Ronald G.; Hari, Siva P.; Rich, Mel

PA Soft Gel Technologies, Inc., USA

SO U.S., 6 pp., which

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K009-48

ICS A61K009-66

NCL 424455000; 424451000

CC 63-6 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6716451	B1	20040406	US 2000-680042	20001004 <--
	US 2004082649	A1	20040429	US 2003-720907	20031124 <--
	US 2004106674	A1	20040603	US 2003-720957	20031124 <--
PRAI	US 1999-168199P	P	19991130	<--	
	US 2000-214481P	P	20000627	<--	
	US 2000-680042	A1	20001004	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6716451	ICM	A61K009-48
	ICS	A61K009-66
	NCL	424455000; 424451000
US 2004082649	ECLA	A61K047/44

<--



US 2004106674 ECLA A61K047/44

&lt;--

- AB A formulation to deliver a full-spectrum of **vitamin E** isomers for improved antioxidant capacity, bioavailability, dissoln. and efficacy is disclosed. The formulation includes dl- $\alpha$ -**tocopheryl** acetate or dl- $\alpha$ -**tocopheryl** succinate (synthetic **vitamin E**), natural **vitamin E** and mixed **tocopherols**, such as  $\alpha$ -,  $\beta$ -,  $\gamma$ - and  $\delta$ - **tocopherol**, as well as four isomers ( $\alpha$ ,  $\beta$ ,  $\gamma$  and  $\delta$ ) of tocotrienols. This formulation is designed to deliver at least 17-fold the antioxidant capacity of synthetic **vitamin E** (dl- $\alpha$ -**tocopheryl** acetate), and at least twice the antioxidant capacity of natural **vitamin E** (d- $\alpha$ -**tocopherol**) as measured by oxygen radical absorbance capacity (ORAC) assay. The potent antioxidant capacity of this formulation affords protection against oxidative damage of cell membranes, heart disease, cancer and **eye** and skin disease. Thus, a formulation contained dl- $\alpha$ -**tocopheryl** acetate 320.0, 70% mixed **tocopherols** 60.0,  $\alpha$ -**tocopherol** 5.7,  $\gamma$ -**tocopherol** 24.0,  $\delta$ -**tocopherol** 7.8, Oryza oil (16% tocotrienols) 23.0, tocotrienols (from Palm) 10.0, d- $\alpha$ -**tocopherol** 80.0, and soybean oil 57.0 mg and  $\beta$ -**tocopherol** 600.0  $\mu$ g.
- ST antioxidant **vitamin E** enhancement
- IT Pinus  
(bark exts.; formulations for enhancement of antioxidant potency of **vitamin E** compds.)
- IT **Antioxidants**  
Drug delivery systems  
Human  
(formulations for enhancement of antioxidant potency of **vitamin E** compds.)
- IT **Carotenes, biological studies**  
Palm oil  
**Tocopherols**  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(formulations for enhancement of antioxidant potency of **vitamin E** compds.)
- IT **Tea products**  
(**green**; formulations for enhancement of antioxidant potency of **vitamin E** compds.)
- IT **Sterols**  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(phyto-; formulations for enhancement of antioxidant potency of **vitamin E** compds.)
- IT **Essential oils**  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(rosemary; formulations for enhancement of antioxidant potency of **vitamin E** compds.)
- IT **Vitis vinifera**  
(seed exts.; formulations for enhancement of antioxidant potency of **vitamin E** compds.)
- IT 50-81-7, **Vitamin C**, biological studies  
59-02-9, D- $\alpha$ -**Tocopherol** 111-02-4, Squalene 119-13-1,  
 $\delta$ -**Tocopherol** 127-40-2, Lutein 148-03-8,  $\beta$ -**Tocopherol** 303-98-0, Coenzyme Q10 432-70-2,  $\alpha$ -Carotene 472-93-5,  $\gamma$ -Carotene 490-23-3,  $\beta$ -Tocotrienol 502-65-8, Lycopene 1200-22-2,  $\alpha$ -**Lipoic acid** 1406-18-4, **Vitamin E** 1721-51-3,  $\alpha$ -Tocotrienol 6829-55-6D, Tocotrienol, analogs 7235-40-7,  $\beta$ -Carotene 7616-22-0,  $\gamma$ -**Tocopherol** 7782-49-2, Selenium, biological studies 11042-64-1,  $\gamma$ -Oryzanol 14101-61-2,  $\gamma$ -Tocotrienol 25612-59-3,  $\delta$ -Tocotrienol 47801-19-4, dl- $\alpha$ -**Tocopheryl** succinate 52225-20-4,

dl- $\alpha$ - **Tocopheryl** acetate

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(formulations for enhancement of antioxidant potency of **vitamin E** compds.)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

(1) Hendler; US 5114957 A 1992 HCAPLUS

(2) McPeak; US 6303586 B1 2001

IT 50-81-7, **Vitamin C**, biological studies

1200-22-2,  $\alpha$  -**Lipoic acid**

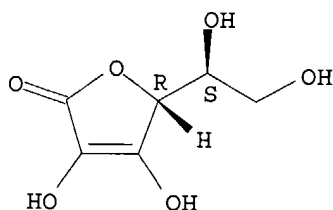
1406-18-4, **Vitamin E**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(formulations for enhancement of antioxidant potency of **vitamin E** compds.)

RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

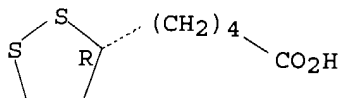
Absolute stereochemistry.



RN 1200-22-2 HCAPLUS

CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 1406-18-4 HCAPLUS

CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:832136 HCAPLUS

DN 139:312388

ED Entered STN: 23 Oct 2003

TI Combinations of **Vaccinium myrtillus** extract and a carotene for  
improving **vision**

IN Kraechter, Hans-Udo; Mehling, Annette; Arias, Carmen; Fabry, Bernd  
PA Cognis Iberia, S.L., Spain

SO Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM A61K035-78

ICS A61K031-05; A61K031-015; A61P027-02

CC 63-4 (Pharmaceuticals)

Section cross-reference(s): 1

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

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PI  EP 1354594      A1      20031022      EP 2002-8624      20020417
      R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
        IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
      WO 2003086428  A1      20031023      WO 2003-EP3619      20030408
      W:  AU, JP, NZ, US
PRAI EP 2002-8624      A      20020417
CLASS

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PATENT NO.      CLASS      PATENT FAMILY CLASSIFICATION CODES
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EP 1354594      ICM      A61K035-78
                  ICS      A61K031-05; A61K031-015; A61P027-02
EP 1354594      ECLA      A61K031/05; A61K035/78

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AB The invention concerns combinations of **Vaccinium myrtillus** extract and a carotene in order to strengthen the **eyes** and to improve **vision**. Thus microcapsules were prepared starting from dissolving 3 g agar in boiling water. A homogeneous dispersion was added that contained 10 g glycerin and 2 g talc in 100 g water; followed by the addition of an other composition that contained 25 g chitosan (Hydagen DCMF), 8 g 10% aqueous **Vaccinium myrtillus** extract, 0.1 lutein, 0.5 g phenonip, 0.5 g polysorbate-20 in 100 g water. The obtained mixture was filtrated, heated to 60°C and dripped into 0.5% sodium alginate to produce the microcapsules.

ST **Vaccinium** ext carotene microcapsule liposome **eye vision**

IT **Eye**  
Gelation agents  
**Vision**  
(combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

IT Anthocyanins  
**Carotenes, biological studies**  
Gelatins, biological studies  
Phosphatidylcholines, biological studies  
Phospholipids, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

IT **Vaccinium myrtillus**  
(extract of; combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

IT Drug delivery systems  
(liposomes; combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

IT Drug delivery systems  
(microcapsules; combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

IT 127-40-2, Lutein **472-61-7, Astaxanthin** 9002-18-0,  
Agar 9005-64-5, Polysorbate-20 9012-76-4, Chitosan  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

IT **68-26-8, Retinol** 116-31-4, **Retinal** 465-42-9,  
Capsanthin 470-38-2, Capsorubin 472-89-9,  $\epsilon$ -Carotene  
472-92-4,  $\delta$ -Carotene 472-93-5,  $\gamma$ -Carotene 6983-79-5, Bixin  
7235-40-7,  $\beta$ -Carotene 7488-99-5,  $\alpha$ -Carotene 9000-69-5,  
Pectins 9003-01-4, Polyacrylic acid 9004-32-4, Carboxymethylcellulose  
9005-38-3, Sodium alginate 9012-36-6, Agarose 11138-66-2, Xanthan gum  
25087-26-7, Polymethacrylic acid 60158-58-9, Delphidine 72746-33-9,  
 $\zeta$ -Carotene  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Gorsek, W; US 6103756 A 2000 HCAPLUS
- (2) Ibrahim, N; US 5955102 A 1999 HCAPLUS
- (3) Nutricia Nv; WO 0185183 A 2001 HCAPLUS
- (4) Tao, Y; WO 0191765 A 2001 HCAPLUS

IT 472-61-7, **Astaxanthin**

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

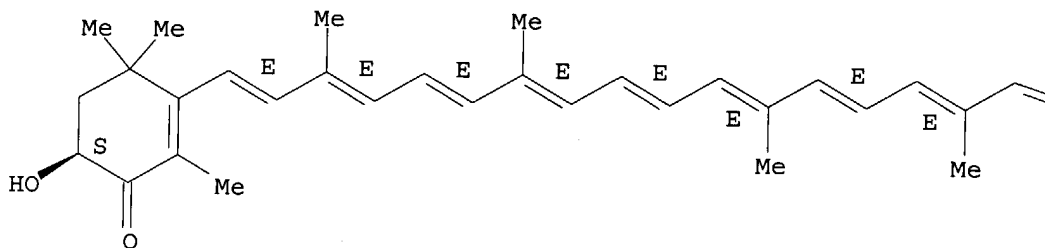
(combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

RN 472-61-7 HCAPLUS

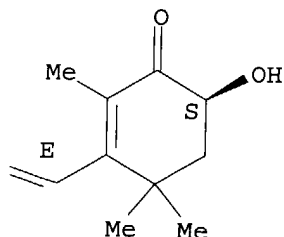
CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



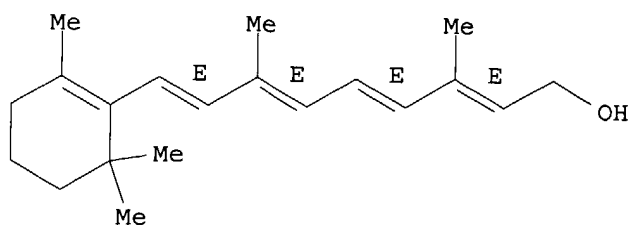
IT 68-26-8, **Retinol**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combinations of **Vaccinium myrtillus** extract and a carotene for improving **vision**)

RN 68-26-8 HCAPLUS

CN Retinol (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L114 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:673822 HCAPLUS

DN 139:185719

ED Entered STN: 28 Aug 2003

TI Health food for improving **eye** conditions

IN Nishimura, Minemitsu

PA Sunny Health Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A61K045-00

ICS A61K031-047; A61K031-122; A61K031-7048; A61K035-78; A61P027-02;  
A23L001-30

CC 63-6 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003238442	A2	20030827	JP 2002-41787	20020219
PRAI	JP 2002-41787		20020219		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003238442	ICM	A61K045-00
	ICS	A61K031-047; A61K031-122; A61K031-7048; A61K035-78; A61P027-02; A23L001-30

AB Disclosed are compns. containing multiple ingredients with different plasma half life for improving health of the **eyes**, in the forms of solns., powders, granules, gels, tablets, and/or capsules. The compns. comprise (1) **blueberry**-origin anthocyanin with a short half life, (2) **astaxanthin** with a medium half life, and (3) lutein with a long half life. For example, a soft capsule contained anthocyanin (blueberry exts.) 150, **astaxanthin** 2, and lutein 6 parts.

ST anthocyanin **astaxanthin** lutein **eye** health improvement

IT **Blueberry**

(anthocyanins from; compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT Drug delivery systems

(capsules, soft; compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT Drug delivery systems

(capsules; compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT **Eye**

Health food

(compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT Anthocyanins

RL: NPO (Natural product occurrence); PAC (Pharmacological activity  
(Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES  
(from **blueberry**; compns. containing anthocyanin and

**astaxanthin** and lutein for improving **eye** health)

IT Drug delivery systems  
(gels; compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT Drug delivery systems  
(granules; compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT Drug delivery systems  
(powders; compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT Drug delivery systems  
(solns.; compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT Drug delivery systems  
(tablets; compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

IT 127-40-2, Lutein **472-61-7, Astaxanthin**  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

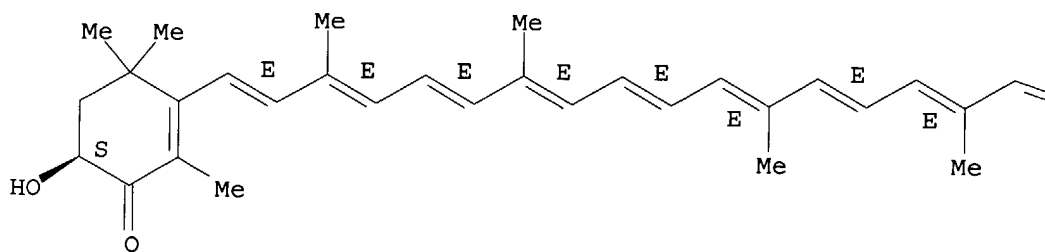
IT **472-61-7, Astaxanthin**  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(compns. containing anthocyanin and **astaxanthin** and lutein for improving **eye** health)

RN 472-61-7 HCAPLUS

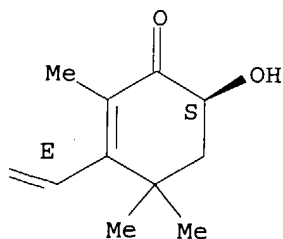
CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



AN 2003:656555 HCAPLUS  
 DN 139:202483  
 ED Entered STN: 22 Aug 2003  
 TI Compositions comprising lycopene for the treatment and prevention of angiogenesis associated pathologies  
 IN Barella, Luca; Goralczyk, Regina; Jung, Klaus; Lein, Michael; Siler, Ulrich; Stoecklin, Elisabeth; Wertz, Karin  
 PA Roche Vitamins A.-G., Switz.; Humboldt Universitaet  
 SO PCT Int. Appl., 27 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K031-015  
 ICS A61K031-355; A61K031-375; A23L001-302; A61K031-05; A61P035-00; A61P027-00; A61P001-00  
 CC 63-6 (Pharmaceuticals)  
 Section cross-reference(s): 1  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003068202	A1	20030821	WO 2003-EP1149	20030206
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI EP 2002-3544	A	20020215		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003068202	ICM	A61K031-015
	ICS	A61K031-355; A61K031-375; A23L001-302; A61K031-05; A61P035-00; A61P027-00; A61P001-00

AB The invention is concerned with the use of lycopene, optionally in combination with **vitamin E** and/or C or other biol. active ingredients as disclosed in the specification, in the manufacture of a composition for the primary and secondary prevention of angiogenesis-associated pathologies and coadjuvant treatment thereof, as well as with particular novel formulations comprising lycopene. A tablet for the coadjuvant treatment of prostate carcinoma is formulated to contain 5 mg of lycopene, 200 mg of **vitamin E**, 250 mg of **vitamin C**, 37.5 mg of resveratrol, and 50 mg of **quercetin**. The daily dosage is two such tablets.

ST lycopene vitamin pharmaceutical angiogenesis pathol  
 IT Sarcoma

(Kaposi's; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)

IT Leukemia  
 (acute lymphocytic; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)

IT Leukemia  
 (acute myelogenous; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)

IT Bronchi, disease  
 (**bronchiolitis**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)

IT Bronchi, disease  
 (**bronchitis**; compns. comprising lycopene for treatment and

- IT prevention of angiogenesis associated pathologies)
- IT Skin, neoplasm
  - (carcinoma, non-melanoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Bladder, neoplasm
- Lung, neoplasm
- Mammary gland, neoplasm
- Pancreas, neoplasm
- Prostate gland, neoplasm
- Stomach, neoplasm
  - (carcinoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Uterus, neoplasm
  - (cervix, carcinoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Leukemia
  - (chronic lymphocytic; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Pancreas, disease
  - (chronic **pancreatitis**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Intestine, neoplasm
  - (colon, carcinoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Angiogenesis
- Asthma
- Brain, neoplasm
- Eye, disease**
- Head
- Hepatitis**
- Hodgkin's disease
- Melanoma
- Obesity
- Ovary, neoplasm
- Periodontium, disease
- Pheochromocytoma
- Pneumonia
- Psoriasis
- Rheumatoid **arthritis**
- Thyroid gland
  - (compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT **Eye, disease**
  - (**diabetic retinopathy**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Lymphoma
  - (diffuse; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Tendon
  - (disease, **tenosynovitis**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Uterus, neoplasm
  - (endometrium, carcinoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Blood vessel, neoplasm
  - (endothelioma, hemangio-; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Cartilage
  - (extract; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Sarcoma
  - (fibrosarcoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)



- IT Lung, disease  
(fibrosis, interstitial; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Stomach, disease  
(**gastritis**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Gingiva, disease  
(**gingivitis**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Blood vessel, neoplasm  
(hemangioma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Blood vessel, neoplasm  
(hemangiopericytoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Blood vessel, neoplasm  
(hemangiosarcoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Bone, disease  
(**inflammatory**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Carcinoma  
(inhibitors; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT **Eye, disease**  
(**keratoconjunctivitis**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Larynx, disease  
(laryngomalacia; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Regeneration, animal  
(liver; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Leukemia  
(lymphoblastoid; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Sarcoma  
(lymphosarcoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT **Eye, disease**  
(**macula, senile degeneration**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Neoplasm  
(metastasis; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Schwann cell  
(neoplasm, schwannoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Neck, anatomical  
(neoplasm, squamous cell carcinoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Nerve, neoplasm  
(neuroblastoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT **Dermatitis**  
(**neurodermatitis**; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Lymphoma  
(non-Hodgkin's; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT **Arthritis**  
(non-rheumatoid; compns. comprising lycopene for treatment and

- prevention of angiogenesis associated pathologies)
- IT Bone, neoplasm  
(osteosarcoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT **Fatty acids, biological studies**  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(polyunsatd., n-3, long-chain; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Intestine, neoplasm  
(rectum, carcinoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Kidney, neoplasm  
(renal cell carcinoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT **Eye, disease**  
(retinopathy; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Nose, disease  
(rhinitis; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Esophagus, neoplasm  
(squamous cell carcinoma; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Synovial membrane, disease  
(synovitis; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Drug delivery systems  
(tablets; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Thyroid gland, disease  
(thyroiditis; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT Tonsil, disease  
(tonsillitis; compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)
- IT 50-14-6, Vitamin D2 50-81-7, **Vitamin c**, biological studies 57-06-7, Allyl isothiocyanate 57-87-4, Ergosterol 67-97-0, Vitamin D3 68-26-8, all-Trans-Retinol 79-81-2, Retinyl palmitate 117-39-5, **Quercetin** 127-40-2, Lutein 127-47-9, Retinyl acetate 144-68-3, **Zeaxanthin** 446-72-0, Genistein 446-72-0D, Genistein, aglycons 458-37-7, Curcumin 472-61-7, **Astaxanthin** 472-70-8,  $\beta$ -Cryptoxanthin 491-70-3, Luteolin 499-30-9, Gluconasturtiin 499-37-6 501-36-0, Resveratrol 502-65-8, Lycopene 505-44-2, 3-Methylsulfinylpropyl isothiocyanate 520-36-5, Apigenin 528-48-3, Fisetin 529-44-2, Myricetin 554-88-1, (Glucoiberin) 646-23-1, 5-Methylsulfinyl-pentyl isothiocyanate 700-06-1, 1H-Indole-3-methanol 961-29-5, Isoliquiritigenin 989-51-5, (-)-Epigallocatechin gallate 1257-08-5 1406-18-4, **Vitamin E** 2257-09-2, Phenylethyl isothiocyanate 3386-97-8, 3-Butenyl isothiocyanate 3650-09-7, Carnosic acid 3952-98-5, (Sinigrin) 4356-52-9, (Glucobrassicin) 4430-35-7 4478-93-7, (Sulforaphane) 5041-81-6, Isoliquiritin 5187-84-8, (Neoglucobrassicin) 5957-80-2, Carnosol 7235-40-7,  $\beta$ -Carotene 12772-57-5, Radicicol 19041-09-9, Gluconapin 19356-17-3, 25-Hydroxyvitamin D3 19683-98-8, Ovalicin 21414-41-5, Glucoraphanin 21973-60-4, 8-Methylsulfinyloctyl glucosinolate 22888-70-6, Silybin 23110-15-8, Fumagillin 29782-68-1, Silydianin 32222-06-3, 1 $\alpha$ ,25-Dihydroxy-vitamin D3 33049-17-1, 6-Methylsulfinylhexyl glucosinolate 33889-69-9, Silychristin) 56142-94-0 65666-07-1, Silymarin 67884-10-0 67920-64-3, 9-Methylsulfinylnonyl glucosinolate 72581-71-6, Isosilybin 75272-81-0 75272-82-1 75272-83-2

77012-75-0, Indol-3-ylmethylisothiocyanate 83327-20-2, 4-Hydroxy glucobrassicin 83327-21-3, 4-Methoxy glucobrassicin 90996-54-6, Rhizoxin 112572-51-7, 7-Methylsulfinylheptyl glucosinolate 126463-64-7, Dihydroeponemycin 126509-46-4, Eponemycin 126769-93-5 129244-98-0 133343-34-7, Lactacystin 134381-21-8, Epoxomicin 135819-69-1 139508-73-9, Depudecin 148717-90-2, Squalamine 206443-55-2 211569-34-5, Motuporamine C 443340-10-1, 2-Methylsulfinylethyl glucosinolate 582304-76-5 582304-79-8 582304-81-2 582304-82-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Gerster, H; JOURNAL OF THE AMERICAN COLLEGE OF NUTRITION 1997, V16(2), P109 HCAPLUS
- (2) Gorsek, W; US 6103756 A 2000 HCAPLUS
- (3) Howard Foundation; WO 9640092 A 1996 HCAPLUS
- (4) Krylov, I; EKSPERIMENTAL' NAIA I KLINICHESKAIA FARMAKOLOGIIA 2002, V65(3), P19 HCAPLUS
- (5) Manfredo, A; US 6350776 B1 2002 HCAPLUS
- (6) McCarty, M; MEDICAL HYPOTHESES 2001, V56(1), P12 HCAPLUS
- (7) Rodney, C; WO 0205827 A 2002 HCAPLUS
- (8) Soldati, F; WO 0189542 A 2001 HCAPLUS
- (9) Ti; WO 0126668 A 2001 HCAPLUS

IT 50-81-7, Vitamin c, biological studies  
68-26-8, all-Trans-Retinol 117-39-5, Quercetin  
144-68-3, Zeaxanthin 472-61-7,  
Astaxanthin 1406-18-4, Vitamin E

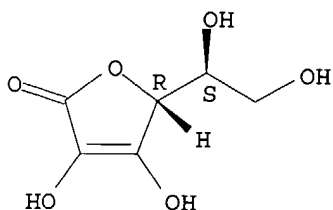
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compns. comprising lycopene for treatment and prevention of angiogenesis associated pathologies)

RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

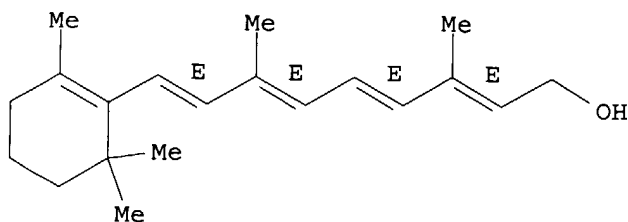
Absolute stereochemistry.



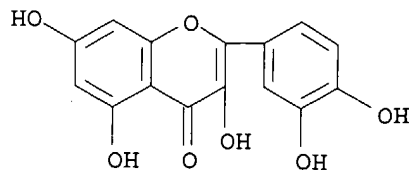
RN 68-26-8 HCAPLUS

CN Retinol (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 117-39-5 HCAPLUS

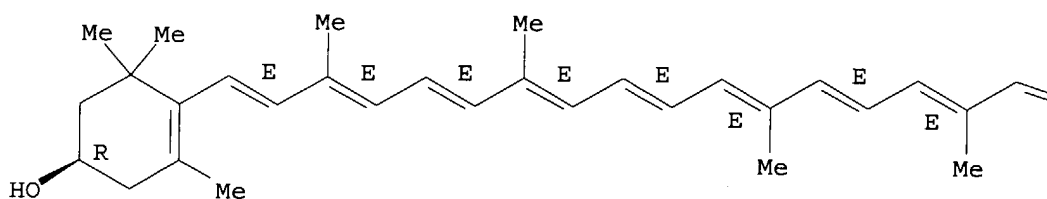
CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI)  
(CA INDEX NAME)

RN 144-68-3 HCAPLUS

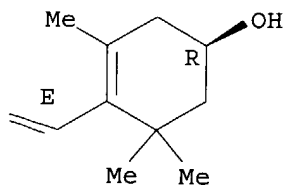
CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

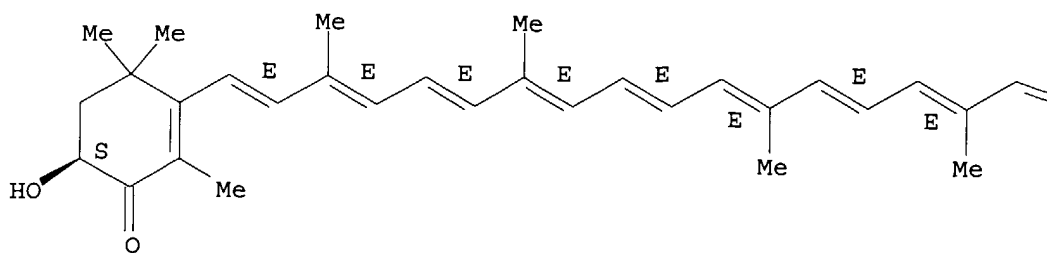


RN 472-61-7 HCAPLUS

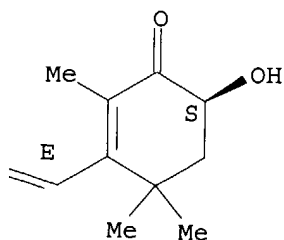
CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



RN 1406-18-4 HCAPLUS  
 CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2003:610249 HCAPLUS  
 DN 139:144004  
 ED Entered STN: 08 Aug 2003  
 TI Lutein/**zeaxanthin** and other **eye** tissue colorants for  
 glare protection and improvement of visual performance in darkness  
 IN Barker, Felix; Goralczyk, Regina; Schalch, Wolfgang  
 PA Roche Vitamins A.-G., Switz.  
 SO PCT Int. Appl., 16 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K031-07  
 ICS A61P027-02  
 CC 1-12 (Pharmacology)  
 Section cross-reference(s): 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003063848	A1	20030807	WO 2003-EP656	20030123
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI EP 2002-1909 A 20020130

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003063848	ICM	A61K031-07
	ICS	A61P027-02

AB The invention relates to the improvement of visual performance, particularly of visual performance in the darkness, by administration of a colorant that is capable of being incorporated into **eye** tissue and/or causing yellowing of **eye** tissue, especially carotenoids, such as lutein and **zeaxanthin**. Pharmaceutical formulations are included.

ST glare visual performance darkness **eye** tissue colorant; lutein **zeaxanthin** glare visual performance darkness; carotenoid glare

- visual performance darkness
- IT Drug delivery systems  
(capsules; lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT **Bilberry**  
(**extract**; lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT Optical reflection  
(glare; lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT Aircraft  
**Antioxidants**  
Beverages  
Coloring materials  
**Eye**  
Food  
Vehicles  
**Vision**  
(lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT **Carotenes, biological studies**  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT Drug delivery systems  
(oral; lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT Amino acids, biological studies  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(selenium; lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT Yeast  
(selenized; lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT Drug delivery systems  
(solids; lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT 7782-49-2D, Selenium, salts  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(and selenized yeast; lutein/**zeaxanthin** and other **eye** tissue colorants for glare protection and improvement of visual performance in darkness)
- IT 50-81-7, **Vitamin C**, biological studies  
68-26-8, Retinol 68-26-8D, Retinol, esters 79-81-2, Retinyl palmitate 127-40-2, Lutein 127-40-2D, Lutein, esters 144-68-3, **Zeaxanthin** 144-68-3D, **Zeaxanthin**, esters 432-70-2,  $\alpha$ -Carotene 472-61-7, **Astaxanthin** 472-61-7D, **Astaxanthin**, esters 472-70-8,  $\beta$ -Cryptoxanthin 502-65-8, Lycopene 514-78-3, Canthaxanthin 1406-18-4, **Vitamin E** 7235-40-7,  $\beta$ -Carotene 7440-66-6D, Zinc, salts 11103-57-4, **Vitamin A** 31272-50-1, Meso-**Zeaxanthin** 31272-50-1D, Meso-**Zeaxanthin**, esters 572870-85-0

572870-86-1

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)(lutein/zeaxanthin and other eye tissue colorants  
for glare protection and improvement of visual performance in darkness)RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Hammond, B; OPTOMETRY AND VISION SCIENCE 1997, V74(7), P499
- (2) Heineremann, P; EXPERIMENTAL BIOLOGY 1984, V43(2), P127 MEDLINE
- (3) Olmedilla, B; JOURNAL OF THE SCIENCE OF FOOD AND AGRICULTURE 2001, V81(9), P904 HCAPLUS
- (4) Richer, S; JOURNAL OF THE AMERICAN OPTOMETRIC ASSOCIATION 1999, V70(1), P24 MEDLINE
- (5) The Howard Foundation; GB 2301775 A 1996 HCAPLUS

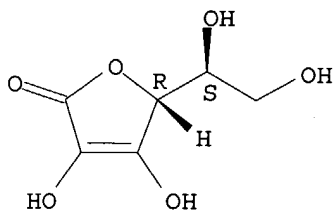
IT 50-81-7, Vitamin C, biological studies  
 68-26-8, Retinol 68-26-8D, Retinol, esters  
 144-68-3, Zeaxanthin 144-68-3D,  
 Zeaxanthin, esters 472-61-7, Astaxanthin  
 472-61-7D, Astaxanthin, esters 514-78-3,  
 Canthaxanthin 1406-18-4, Vitamin E  
 11103-57-4, Vitamin A 31272-50-1,  
 Meso-Zeaxanthin 31272-50-1D, Meso-Zeaxanthin  
 , esters

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)(lutein/zeaxanthin and other eye tissue colorants  
for glare protection and improvement of visual performance in darkness)

RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

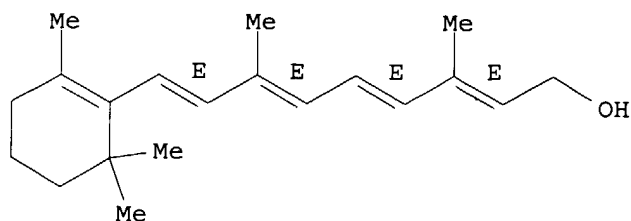
Absolute stereochemistry.



RN 68-26-8 HCAPLUS

CN Retinol (9CI) (CA INDEX NAME)

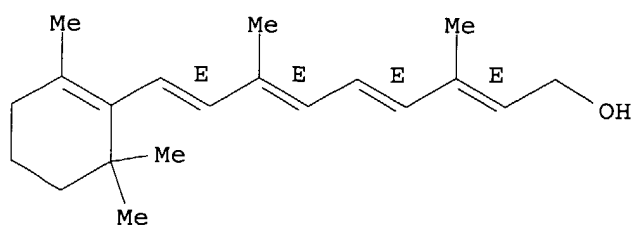
Double bond geometry as shown.



RN 68-26-8 HCAPLUS

CN Retinol (9CI) (CA INDEX NAME)

Double bond geometry as shown.

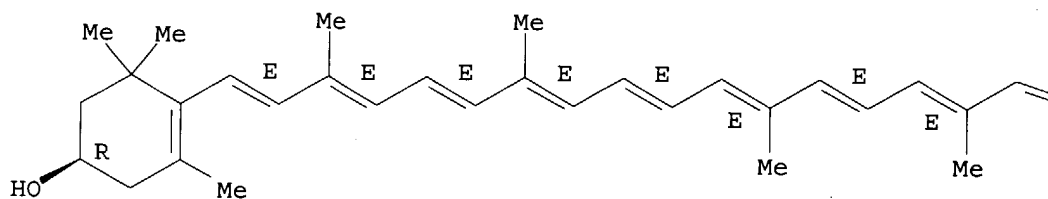


RN 144-68-3 HCAPLUS

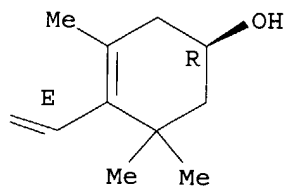
CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

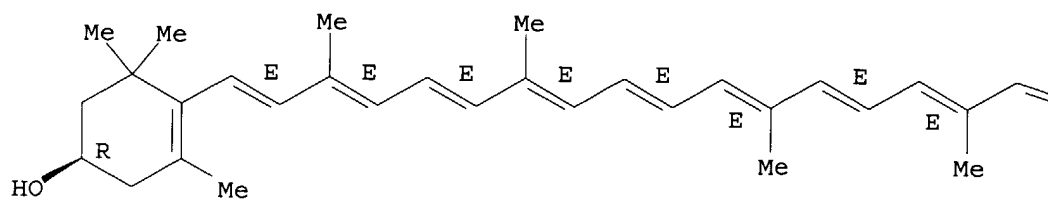


RN 144-68-3 HCAPLUS

CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

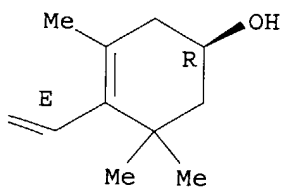
Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A





PAGE 1-B

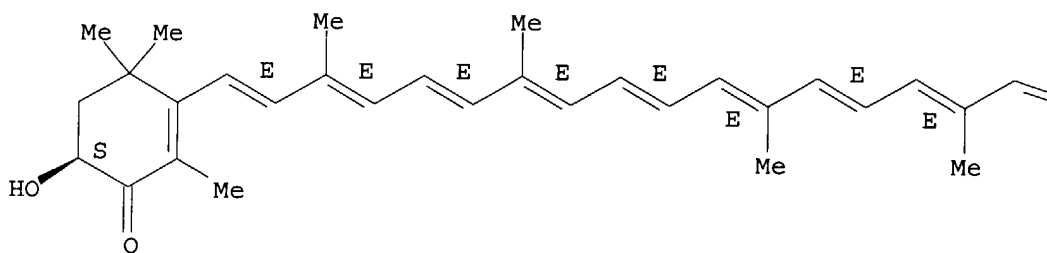


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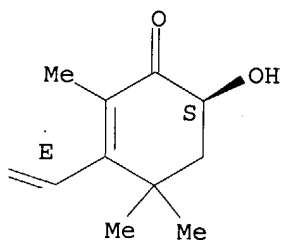
CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

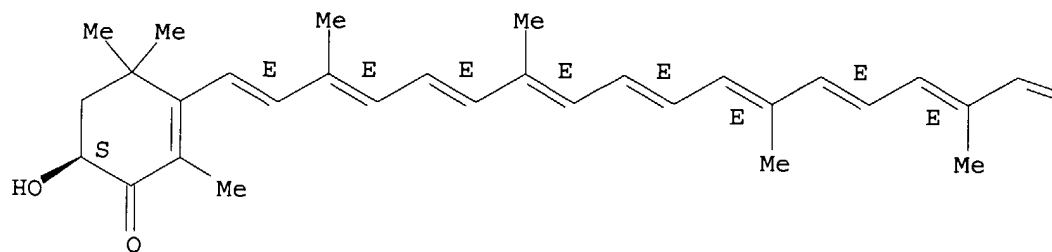


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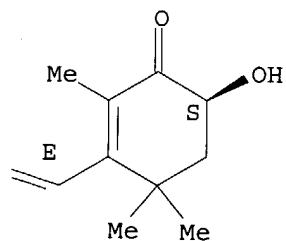
CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



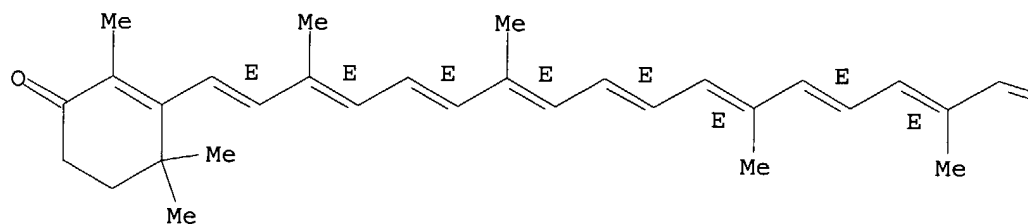
PAGE 1-B



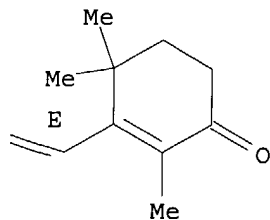
RN 514-78-3 HCAPLUS  
 CN  $\beta,\beta$ -Carotene-4,4'-dione (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



RN 1406-18-4 HCAPLUS  
 CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

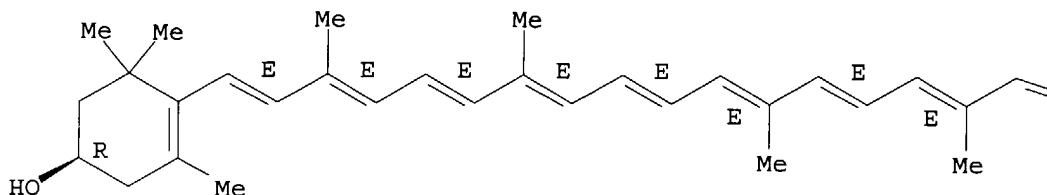
RN 11103-57-4 HCAPLUS  
CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

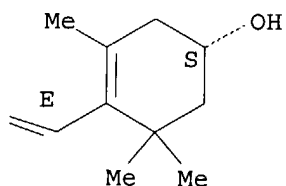
RN 31272-50-1 HCAPLUS  
CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'S)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



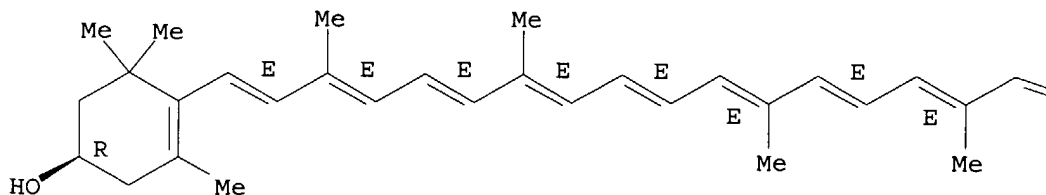
PAGE 1-B



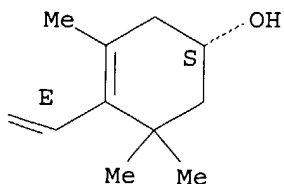
RN 31272-50-1 HCAPLUS  
CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'S)- (9CI) (CA INDEX NAME)

Relative stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



DN 139:128013  
 ED Entered STN: 01 Aug 2003  
 TI Anti-inflammatory formulations  
 IN Mahmoud, Fadia F.  
 PA Haines, David, USA  
 SO PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K  
 CC 1-7 (Pharmacology)  
 Section cross-reference(s): 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003061572	A2	20030731	WO 2003-US1428	20030116 <--
	WO 2003061572	C2	20040226		
	WO 2003061572	A3	20040513		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2002-350298P	P	20020116	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003061572	ICM	A61K

AB The invention features compns. containing an antioxidant and/or a ginkgolide compound to reduce **inflammation**. Combination drug therapy using antioxidant and/or a ginkgolide compound with an anti-inflammatory agent reduces adverse side effects associated with many known anti-inflammatory agents.

ST **antiinflammatory** antioxidant ginkgolide combination

IT Mast cell  
 T cell (lymphocyte)  
 (activation inhibition by; anti-inflammatory formulations containing antioxidants and/or ginkgolides to reduce side effects)

IT Antihistamines  
 (anti-inflammatory formulations containing antioxidants and/or ginkgolides to reduce side effects)

IT **Carotenes, biological studies**  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (anti-inflammatory formulations containing antioxidants and/or ginkgolides to reduce side effects)

IT Lung, disease  
 (**inflammation**, treatment of; anti-inflammatory formulations containing antioxidants and/or ginkgolides to reduce side effects)

IT **Dermatitis**  
 (treatment of; anti-inflammatory formulations containing antioxidants and/or ginkgolides to reduce side effects)

IT 50-81-7, L-Ascorbic acid, biological studies **472-61-7, Astaxanthin** 15291-75-5, Ginkgolide A 15291-76-6, Ginkgolide 15291-77-7, Ginkgolide B 15291-78-8, Ginkgolide M 33570-04-6, Bilobalide 58581-89-8D, Azelastine, derivs. 83881-51-0D, Ceti derivs. 107438-79-9, Ginkgolide J 122933-57-7, Egb 761 1325

BN 50730

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (anti-inflammatory formulations containing antioxidants and/or  
 ginkgolides to reduce side effects)

IT 472-61-7, Astaxanthin

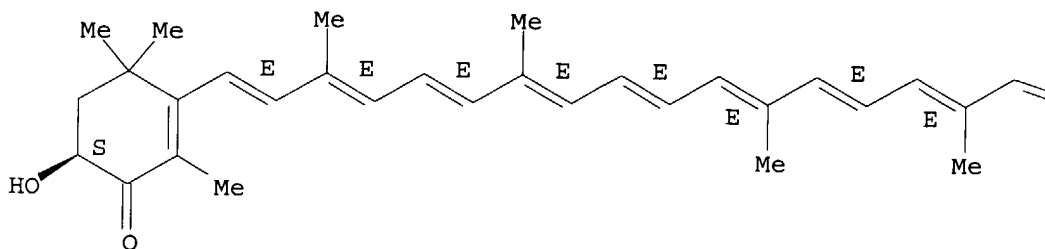
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (anti-inflammatory formulations containing antioxidants and/or  
 ginkgolides to reduce side effects)

RN 472-61-7 HCAPLUS

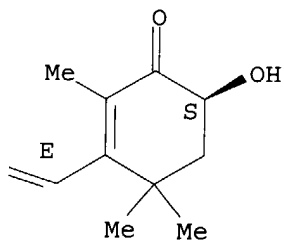
CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA  
 INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

PAGE 1-A

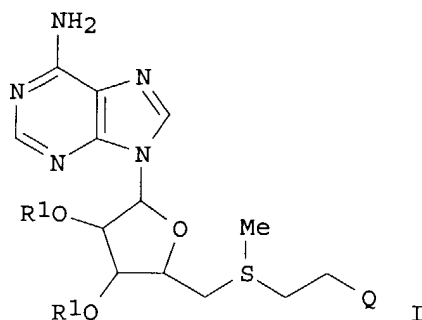


PAGE 1-B



L114 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2003:319452 HCAPLUS  
 DN 138:314630  
 ED Entered STN: 25 Apr 2003  
 TI Orthomolecular sulfo-adenosylmethionine derivatives with antioxidant  
 properties  
 IN Wilburn, Michael D.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 17 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM A61K031-7076  
 ICS C07H019-16  
 NCL 514045000; 536027300  
 CC 1-12 (Pharmacology)  
 Section cross-reference(s): 34  
 FAN.CNT 1  
 PATENT NO. KIND DATE APPLICATION NO. DATE

PI	US 2003078231	A1	20030424	US 2001-886612	20010622 <--
PRAI	US 2001-886612		20010622	<--	
CLASS					
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES			
US 2003078231	ICM	A61K031-7076			
	ICS	C07H019-16			
	NCL	514045000; 536027300			
OS	MARPAT 138:314630				
GI					



- AB Disclosed are orthomol. sulfo-adenosylmethionine derivative compds., compns., and their uses for effecting a biol. activity in an animal, such as neurochem. activity; liver biol. activity; heart and artery function; cartilage, bone and joint health; stomach and/or intestinal lining resistance to ulceration; immune function; cell membrane integrity; and pain and **inflammation**. The compds. of the present invention are further useful for preventing or treating diseases or conditions; treating viral infections, infectious diseases, leukemia, and obesity; and reducing the risk of Sudden Infant Death Syndrome in an animal. The compds. of the present invention are I (R1 = H, C1-C10 alkyl, C2-C10 alkenyl or alkynyl, -C(O)R2; R2 = C1-C10 alkyl, C2-C10 alkenyl or alkynyl; Q = -C(NH3)C(O)AX, -C(COOH)NHX; A = O, N; X = a defined reaction product) or pharmaceutically acceptable salt, ester or solvate thereof.  $\alpha$ -(S-adenosylmethionine)-O-**tocopherol** was prepared from N-Acetyl-S-benzyl-L-homocysteine,  $\alpha$ -**tocopherol**, and 5'-O-p-Tolylsulfonyladenosine.
- ST orthomol S adenosylmethionine deriv antioxidant
- IT Intestine, disease  
(Crohn's, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)
- IT Seizures  
(Grand Mal, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)
- IT Nervous system, disease  
(Guillain-Barre syndrome, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)
- IT Gangliosidosis  
(Tay-Sachs disease, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)
- IT Liver  
Nerve  
(activity; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)
- IT **Dermatomyositis**  
(acute, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)
- IT Skin, disease

(aging, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Liver, disease  
(alc., treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Nervous system, disease  
(amyotrophic lateral sclerosis, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Antiarteriosclerotics  
(antiatherosclerotics; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Anemia (disease)  
(aplastic, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Allergy  
(atopy, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT **Hepatitis**  
(autoimmune, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Liver, disease  
Pain  
(chronic, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Rhythm, biological  
(circadian, altered, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Nerve, disease  
(death, treatment of tissue damage from; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Muscle, disease  
Nervous system, disease  
(degeneration, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Mental disorder  
(dementia, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Nerve, disease  
(demyelination, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Mental disorder  
(depression, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Joint, anatomical  
(disease, degeneration, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Joint, anatomical  
(disease, **inflammation**, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Joint, anatomical  
(disease, injury, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Immunity  
(disorder, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Artery, disease  
Heart, disease  
(due to elevated blood levels of homocysteine, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Behavior  
Emotion  
(enhancing; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Chemicals  
(environmental, treatment of hypersensitivity to; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Kidney, disease  
(failure, neuropathy, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Kidney, disease  
(failure, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Muscle, disease  
(fibromyalgia, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Artery  
Heart  
Immune system  
(function; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Kidney, disease  
(**glomerulonephritis**, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Bone  
Cartilage  
Joint, anatomical  
(health; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Allergy  
(hypersensitivity, to environmental chems., treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Cell aging  
(immune cell, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Intestine, disease  
(**inflammatory**, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Liver, disease  
(injury, treatment of NSAID-caused; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Reperfusion  
(injury, treatment of neural tissue damage from; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Nerve, disease  
(injury, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Cell membrane  
(integrity; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Nerve, disease  
(ischemia, treatment of tissue damage from; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Intestine  
(lining; resistance to ulceration; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT **Eye, disease**  
(**macula, senile degeneration**, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Phosphatidylcholines, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(maintaining or effecting neuronal membrane ratios of cholesterol and; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Estrogens  
Lipids, biological studies  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);



THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (methylated, reaction products with S-adenosyl-L-methionine derivs.;  
 orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Kidney, disease  
 (nephrotic syndrome, treatment of; orthomol. S-adenosyl-L-methionine  
 derivs. with antioxidant properties)

IT Cell death  
 (neuron, treatment of tissue damage from; orthomol.  
 S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Pain  
 (neuropathic, treatment of; orthomol. S-adenosyl-L-methionine derivs.  
 with antioxidant properties)

IT Nerve, disease  
 (neuropathy, pain, treatment of; orthomol. S-adenosyl-L-methionine  
 derivs. with antioxidant properties)

IT Anti-**inflammatory** agents  
 (nonsteroidal, treatment of liver damage from; orthomol.  
 S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Analgesics  
 Animal  
 Anti-AIDS agents  
 Anti-Alzheimer's agents  
 Anti-infective agents  
 Anti-**inflammatory** agents  
 Antiarthritics  
 Anticonvulsants  
 Antidepressants  
 Antidiabetic agents  
 Antiobesity agents  
**Antioxidants**  
 Antiparkinsonian agents  
 Antirheumatic agents  
 Antitumor agents  
 Antiviral agents  
 Anxiolytics  
 Human  
 (orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Nerve, disease  
 (peripheral neuropathy, treatment of; orthomol. S-adenosyl-L-methionine  
 derivs. with antioxidant properties)

IT Nerve, disease  
 (peripheral, injury, treatment of; orthomol. S-adenosyl-L-methionine  
 derivs. with antioxidant properties)

IT Disease, animal  
 (prevention or treatment of; orthomol. S-adenosyl-L-methionine derivs.  
 with antioxidant properties)

IT Biliary tract, disease  
 (primary biliary cirrhosis, treatment of; orthomol.  
 S-adenosyl-L-methionine derivs. with antioxidant properties)

IT **Curcuma longa**  
 (reaction products with S-adenosyl-L-methionine derivs.; orthomol.  
 S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Anthocyanins  
 Betaines  
 Diglycerides  
 Fibronectins  
 Lysophosphatidylcholines  
 Melanins  
 Proanthocyanidins  
 Tannins  
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (reaction products with S-adenosyl-L-methionine derivs.; orthomol.

S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Stomach  
(resistance to ulceration; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT **Eye, disease**  
(**retina, ischemia**, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Connective tissue, disease  
(scleroderma, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Shock (circulatory collapse)  
(septic, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Brain, disease  
(stroke, treatment of vascular; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Death  
(sudden infant death syndrome, prevention of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Head, disease

Injury  
(trauma, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Cell proliferation  
(treatment of diseases related to; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Liver, disease  
(treatment of estrogen-induced; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Blood  
(treatment of heart and artery disease due to elevated homocysteine levels in; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Toxicants  
(treatment of liver damage from exposure to; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Estrogens  
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(treatment of liver problems from; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Apoptosis  
Cell death  
Necrosis  
(treatment of tissue damage from; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT AIDS (disease)

Aging, animal

Alzheimer's disease

Antipsychotics

Anxiety

**Arthritis**

Atherosclerosis

**Behcet's syndrome**

Biliary tract, disease

Cachexia

Cardiovascular system, disease

Cirrhosis

Cystic fibrosis

Diabetes mellitus

Eczema

Epilepsy

Graves' disease

Infection

**Inflammation**

Leukemia  
 Lupus erythematosus  
 Multiple sclerosis  
 Muscular dystrophy  
 Myasthenia gravis  
 Neoplasm  
 Nervous system, disease

**Osteoarthritis**

Osteoporosis  
 Pain  
 Parkinson's disease  
 Psoriasis  
 Rheumatoid arthritis  
 Schizophrenia  
 Sickle cell anemia  
 Transplant rejection

(treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Intestine, disease  
 Stomach, disease  
 (ulcer, prevention of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Intestine, disease  
 (ulcerative colitis, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Eye, disease  
 (uveitis, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT Infection  
 (viral, treatment of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT 5308-90-7D, Taxicin-II, reaction products with S-adenosyl-L-methionine derivs.  
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (Taxicin-II; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT 57-88-5, Cholesterol, biological studies  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (maintaining or effecting neuronal membrane ratios of phosphatidylcholine and; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT 50-67-9D, Serotonin, reaction products with S-adenosyl-L-methionine derivs. 50-99-7D, D-Glucose, reaction products with S-adenosyl-L-methionine derivs. 51-41-2D, Norepinephrine, reaction products with S-adenosyl-L-methionine derivs. 51-43-4D, Epinephrine, reaction products with S-adenosyl-L-methionine derivs. 51-45-6D, Histamine, reaction products with S-adenosyl-L-methionine derivs. 51-61-6D, Dopamine, reaction products with S-adenosyl-L-methionine derivs. 51-84-3D, Acetylcholine, reaction products with S-adenosyl-L-methionine derivs. 55-10-7D, reaction products with S-adenosyl-L-methionine derivs. 56-87-1D, Lysine, reaction products with S-adenosyl-L-methionine derivs. 57-00-1D, Creatine, reaction products with S-adenosyl-L-methionine derivs. 59-92-7D, reaction products with S-adenosyl-L-methionine derivs. 60-27-5 D, Creatinine, reaction products with S-adenosyl-L-methionine derivs. 61-50-7D, N,N-Dimethyltryptamine, reaction products with S-adenosyl-L-methionine derivs. 61-54-1D, Tryptamine, reaction products with S-adenosyl-L-methionine derivs. 62-49-7D, Choline, reaction products with S-adenosyl-L-methionine derivs. 67-07-2D, Phosphocreatine, reaction products with S-adenosyl-L-methionine derivs. 70-18-8D, Glutathione, reaction products with S-adenosyl-L-methionine derivs. 70-26-8D, Ornithine, reaction products with S-adenosyl-L-

methionine derivs. 71-00-1D, L-Histidine, reaction products with S-adenosyl-L-methionine derivs. 73-31-4D, Melatonin, reaction products with S-adenosyl-L-methionine derivs. 83-86-3D, Phytic acid, reaction products with S-adenosyl-L-methionine derivs. 86-01-1D, GTP, reaction products with S-adenosyl-L-methionine derivs. 89-00-9D, Quinolinic acid, reaction products with S-adenosyl-L-methionine derivs. 90-24-4D, Xanthoxylin, reaction products with S-adenosyl-L-methionine derivs. 90-64-2D, Mandelic acid, reaction products with S-adenosyl-L-methionine derivs. 90-71-1D, Taxicatin, reaction products with S-adenosyl-L-methionine derivs. 97-31-4D, Normetanephrine, reaction products with S-adenosyl-L-methionine derivs. 98-98-6D, Picolinic acid, reaction products with S-adenosyl-L-methionine derivs. 99-88-7D, Cumidine, reaction products with S-adenosyl-L-methionine derivs. 106-24-1D, Geraniol, reaction products with S-adenosyl-L-methionine derivs. **107-35-7D, Taurine**, reaction products with S-adenosyl-L-methionine derivs. 107-92-6D, Butyric acid, reaction products with S-adenosyl-L-methionine derivs. 107-97-1D, N-Methylglycine, reaction products with S-adenosyl-L-methionine derivs. **117-39-5D, Quercetin**, reaction products with S-adenosyl-L-methionine derivs. 121-34-6D, Vanillic acid, reaction products with S-adenosyl-L-methionine derivs. 126-33-0D, Sulfolane, reaction products with S-adenosyl-L-methionine derivs. 127-17-3D, reaction products with S-adenosyl-L-methionine derivs. 127-40-2D, Lutein, reaction products with S-adenosyl-L-methionine derivs. **144-68-3D, Zeaxanthin**, reaction products with S-adenosyl-L-methionine derivs. 149-91-7D, Gallic acid, reaction products with S-adenosyl-L-methionine derivs. 150-86-7D, Phytol, reaction products with S-adenosyl-L-methionine derivs. 153-18-4D, Rutin, reaction products with S-adenosyl-L-methionine derivs. 305-84-0D, Carnosine, reaction products with S-adenosyl-L-methionine derivs. 327-97-9D, Chlorogenic acid, reaction products with S-adenosyl-L-methionine derivs. 446-72-0D, Genistein, reaction products with S-adenosyl-L-methionine derivs. 458-37-7D, Curcumin, reaction products with S-adenosyl-L-methionine derivs. **472-61-7D, Astaxanthin**, reaction products with S-adenosyl-L-methionine derivs. 472-70-8D, Cryptoxanthin, reaction products with S-adenosyl-L-methionine derivs. 476-66-4D, Ellagic acid, reaction products with S-adenosyl-L-methionine derivs. 480-18-2D, Taxifolin, reaction products with S-adenosyl-L-methionine derivs. 486-66-8D, Daidzein, reaction products with S-adenosyl-L-methionine derivs. 488-69-7D, Fructose 1,6-bisphosphate, reaction products with S-adenosyl-L-methionine derivs. 490-46-0D, Epicatechin, reaction products with S-adenosyl-L-methionine derivs. 491-70-3D, Luteolin, reaction products with S-adenosyl-L-methionine derivs. 502-61-4D, Farnesene, reaction products with S-adenosyl-L-methionine derivs. 506-32-1D, Arachidonic acid, reaction products with S-adenosyl-L-methionine derivs. 506-37-6D, Nervonic acid, reaction products with S-adenosyl-L-methionine derivs. 512-29-8D, Flavoxanthin, reaction products with S-adenosyl-L-methionine derivs. 520-26-3D, Hesperidin, reaction products with S-adenosyl-L-methionine derivs. 520-33-2D, Hesperitin, reaction products with S-adenosyl-L-methionine derivs. 520-36-5D, Apigenin, reaction products with S-adenosyl-L-methionine derivs. 528-48-3D, Fisetin, reaction products with S-adenosyl-L-methionine derivs. 528-58-5D, Cyanidin chloride, reaction products with S-adenosyl-L-methionine derivs. 536-66-3D, Cumic acid, reaction products with S-adenosyl-L-methionine derivs. 541-15-1D, Carnitine, reaction products with S-adenosyl-L-methionine derivs. 545-47-1D, Lupeol, reaction products with S-adenosyl-L-methionine derivs. 584-85-0D, Anserine, reaction products with S-adenosyl-L-methionine derivs. 590-55-6D, Carbamyl phosphate, reaction products with S-adenosyl-L-methionine derivs. 607-80-7D, Sesamin, reaction products with S-adenosyl-L-methionine derivs. 673-50-7D, N-Methylhistamine, reaction products with S-adenosyl-L-methionine derivs. 693-72-1D, Vaccenic acid,

reaction products with S-adenosyl-L-methionine derivs. 700-06-1D, Indole-3-carbinol, reaction products with S-adenosyl-L-methionine derivs. 863-03-6D, Epicatechin gallate, reaction products with S-adenosyl-L-methionine derivs. 970-74-1D, Epigallocatechin, reaction products with S-adenosyl-L-methionine derivs. 989-51-5D, Epigallocatechin gallate, reaction products with S-adenosyl-L-methionine derivs. 1118-68-9D, N,N-Dimethylglycine, reaction products with S-adenosyl-L-methionine derivs. 1192-20-7D, Homoserine lactone, reaction products with S-adenosyl-L-methionine derivs. 1361-49-5D, Taxine A, reaction products with S-adenosyl-L-methionine derivs. 1481-83-0D, Flavan-3-ol, derivs., reaction products with S-adenosyl-L-methionine derivs. 1553-55-5D, HMG Co-A, reaction products with S-adenosyl-L-methionine derivs. 2009-64-5D, Neopterin, reaction products with S-adenosyl-L-methionine derivs. 2281-22-3D, S-Allylmercapto-L-cysteine, reaction products with S-adenosyl-L-methionine derivs. 2835-81-6D, analogs, reaction products with S-adenosyl-L-methionine derivs. 2922-83-0D, Kynurenine, reaction products with S-adenosyl-L-methionine derivs. 3040-38-8D, Acetyl-L-carnitine, reaction products with S-adenosyl-L-methionine derivs. 5001-33-2D, Metanephrene, reaction products with S-adenosyl-L-methionine derivs. 5308-89-4D, Taxicin I, reaction products with S-adenosyl-L-methionine derivs. 5989-27-5D, reaction products with S-adenosyl-L-methionine derivs. 7400-08-0D, p-Coumaric acid, reaction products with S-adenosyl-L-methionine derivs. 9000-69-5D, Pectin, reaction products with S-adenosyl-L-methionine derivs. 10139-06-7D, Linatine, reaction products with S-adenosyl-L-methionine derivs. 12672-40-1D, Calcium pectate, reaction products with S-adenosyl-L-methionine derivs. 15291-75-5D, Ginkgolide A, reaction products with S-adenosyl-L-methionine derivs. 15291-76-6D, Ginkgolide C, reaction products with S-adenosyl-L-methionine derivs. 15291-77-7D, Ginkgolide B, reaction products with S-adenosyl-L-methionine derivs. 17528-72-2D, Tetrahydrobiopterin, reaction products with S-adenosyl-L-methionine derivs. 19026-31-4D, Taxodione, reaction products with S-adenosyl-L-methionine derivs. 19253-88-4D, Trimethyllysine, reaction products with S-adenosyl-L-methionine derivs. 19660-77-6D, Phytochlorin, reaction products with S-adenosyl-L-methionine derivs. 19891-74-8D, Lycoxanthin, reaction products with S-adenosyl-L-methionine derivs. 19891-75-9D, Lycophyll, reaction products with S-adenosyl-L-methionine derivs. 22059-21-8D, ACC, reaction products with S-adenosyl-L-methionine derivs. 22150-76-1D, Biopterin, reaction products with S-adenosyl-L-methionine derivs. 22888-70-6D, Silybin, reaction products with S-adenosyl-L-methionine derivs. 23513-14-6D, 6-Gingerol, reaction products with S-adenosyl-L-methionine derivs. 29908-03-0D, S-Adenosyl-L-methionine, derivs. 57072-36-3D, Queuosine, reaction products with S-adenosyl-L-methionine derivs. 57828-26-9D, Lipoic acid, reaction products with S-adenosyl-L-methionine derivs. 72496-59-4D, Queuine, reaction products with S-adenosyl-L-methionine derivs. 75645-22-6D, Diphthamide, reaction products with S-adenosyl-L-methionine derivs. 80550-27-2D, reaction products with S-adenosyl-L-methionine derivs. 92285-01-3D, Ajoene, reaction products with S-adenosyl-L-methionine derivs. 130384-52-0D, reaction products with S-adenosyl-L-methionine derivs.

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT 482298-55-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT 59-02-9,  $\alpha$ -**Tocopherol** 5135-30-8 142435-77-6

RL: RCT (Reactant); RACT (Reactant or reagent)

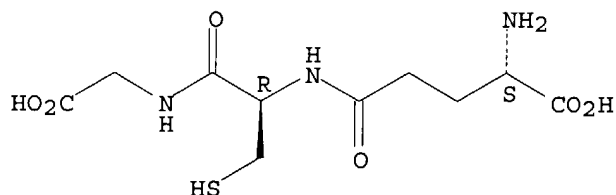
(orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

IT 6027-13-0, Homocysteine  
 RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)  
 (treatment of heart and artery disease due to elevated blood levels of; orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

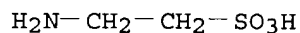
IT 70-18-8D, **Glutathione**, reaction products with S-adenosyl-L-methionine derivs. 107-35-7D, **Taurine**, reaction products with S-adenosyl-L-methionine derivs. 117-39-5D, **Quercetin**, reaction products with S-adenosyl-L-methionine derivs. 144-68-3D, **Zeaxanthin**, reaction products with S-adenosyl-L-methionine derivs. 472-61-7D, **Astaxanthin**, reaction products with S-adenosyl-L-methionine derivs.  
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (orthomol. S-adenosyl-L-methionine derivs. with antioxidant properties)

RN 70-18-8 HCAPLUS  
 CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

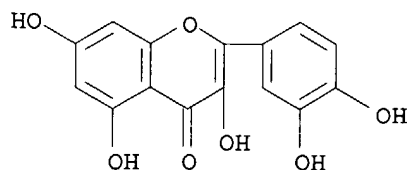
Absolute stereochemistry.



RN 107-35-7 HCAPLUS  
 CN Ethanesulfonic acid, 2-amino- (9CI) (CA INDEX NAME)



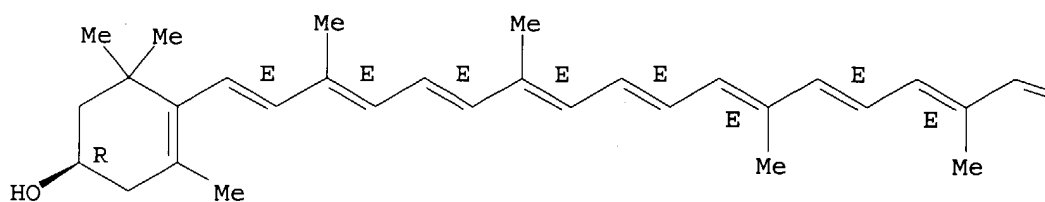
RN 117-39-5 HCAPLUS  
 CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI)  
 (CA INDEX NAME)



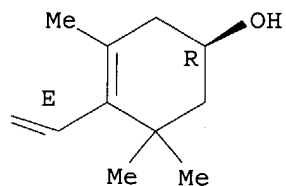
RN 144-68-3 HCAPLUS  
 CN β,β-Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

PAGE 1-A



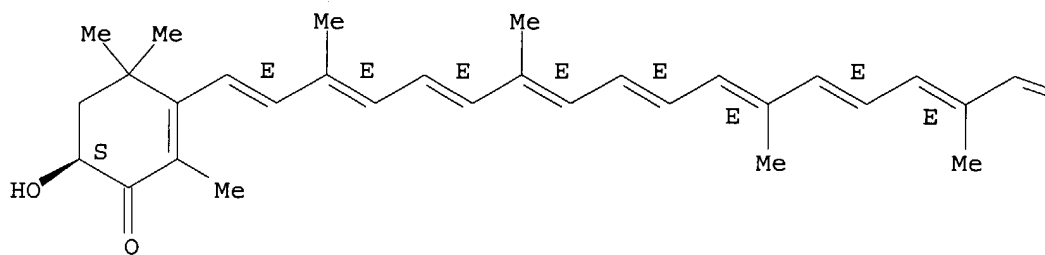
PAGE 1-B



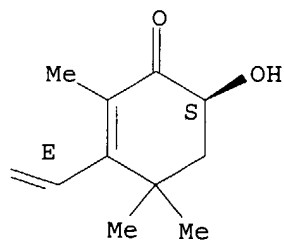
RN 472-61-7 HCAPLUS

CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA  
INDEX NAME)Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L114 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 2003:133068 HCAPLUS  
DN 138:158869  
ED Entered STN: 21 Feb 2003

TI Medicinal compositions having effects of ameliorating **eye** diseases and holding **eye** functions  
 IN Yamagami, Chiduko; Yamagami, Sueto; Itakura, Hiroshige  
 PA Japan  
 SO PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 IC ICM A61K035-413  
 ICS A61K035-60; A61K035-58; A61K031-375; A61K031-355; A61K031-122;  
 A61K031-015; A61K035-78; A61K009-50; A61K009-18; A61P027-02  
 CC 63-6 (Pharmaceuticals)  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003013556	A1	20030220	WO 2001-JP6672	20010802 <--
W: AU, CN, JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				

PRAI WO 2001-JP6672 20010802 <--

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003013556	ICM	A61K035-413
	ICS	A61K035-60; A61K035-58; A61K031-375; A61K031-355; A61K031-122; A61K031-015; A61K035-78; A61K009-50; A61K009-18; A61P027-02

AB It is said that active oxygen largely affects **eye** diseases. In particular, age-related macular degeneration is considered as a serious disease for which no therapeutic method has been established so far. A large amount of active oxygen is generated due to the concentration of light at the

macula in the **retina**. It is estimated that damages due to the active oxygen are accumulated in the macula with aging, thereby resulting in the onset of macular degeneration. Medicinal compns. efficacious against these **eye** diseases are obtained by the combination of the recent results in Western medicine with traditional Chinese knowledge. These compns. contain as the fundamental main components animal livers, which have been employed as remedies for **eye** diseases for a long time, and vitamins and carotenoids having a strong effect of eliminating active oxygen from the human body. As the animal livers, use can be made of carp liver, mamushi pit viper liver and sheep liver. Examples of the antioxidants include **vitamin C**, **vitamin E**, **astaxanthin** and lycopene. It is favorable to add powdery **blueberry** concentrate having an effect of activating the re-synthesis of rhodopsin.

ST vitamin animal liver oral **eye** disease

IT **Blueberry**

Lamprey

(concentrate, powder; medicinal compns. containing animal livers, antioxidative

vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)

IT Lentinula edodes

(exts., powder; medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)

IT Chrysanthemum

(flower; medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)

IT Cyprinus

Gloydius blomhoffi



- Ovis aries  
(liver; medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)
- IT **Eye, disease**  
(macula, degeneration; medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)
- IT Acer nikoense  
**Antioxidants**  
Cassia  
Cornus  
Engelhardtia chrysolepis  
**Eye, disease**  
Human  
Liver  
Panax  
Plantago  
Senecio scandens  
(medicinal compns. containing animal livers, antioxidative vitamins, and other **natural** products having effects of ameliorating **eye** diseases and holding **eye** functions)
- IT **Carotenes, biological studies**  
Natural products, pharmaceutical  
Vitamins  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)
- IT Satsuma  
(peel, powder; medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)
- IT Rehmannia  
Salvia miltiorrhiza  
(powder; medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)
- IT Pearl  
(shell powders; medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)
- IT Drug delivery systems  
(tablets; medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)
- IT 50-81-7, **Vitamin C**, biological studies  
472-61-7, **Astaxanthin** 502-65-8, **Lycopene**  
1406-18-4, **Vitamin E** 9007-27-6, **Chondroitin**  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(medicinal compns. containing animal livers, antioxidative vitamins, and other natural products having effects of ameliorating **eye** diseases and holding **eye** functions)
- RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
- RE
- (1) Basf Aktiengesellschaft; JP 200086505 A 2000
  - (2) Basf Aktiengesellschaft; EP 981969 A1 2000 HCAPLUS
  - (3) Hiramitsu, T; Gendai Iryou 1993, V25(10), P143
  - (4) Hiramitsu, T; J Act Oxyg Free Rad 1993, V4(1), P28 HCAPLUS
  - (5) Imanishi, Y; Kiso to Rinsho 1984, V18(5), P405
  - (6) Kadoya, K; Atarashiii Ganka 1998, V15(5), P631 HCAPLUS
  - (7) L'Oreal; JP 06-227961 A 1994 HCAPLUS

- (8) L'Oreal; EP 586303 A1 1994 HCAPLUS  
 (9) Lion Corporation; JP 08-259451 A 1996 HCAPLUS  
 (10) Nissei Marine Kogyo K K; JP 05-97690 A 1993  
 (11) Osaka Chem Lab; JP 60-186263 A 1985  
 (12) Rose, R; Ocular Oxidants and Antioxidant Protection 1998, V217(4), P397  
 HCAPLUS  
 (13) Sawada Nogyo Kyodo Kumiai; JP 08-242815 A 1996  
 (14) Showa Kagaku Kogyo K K; JP 57-179121 A 1982  
 (15) Tama Seikagaku K K; JP 200146030 A 2001

IT 50-81-7, Vitamin C, biological studies

472-61-7, Astaxanthin 1406-18-4,

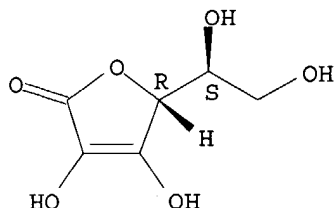
Vitamin E

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (medicinal compns. containing animal livers, antioxidative vitamins, and  
 other natural products having effects of ameliorating **eye**  
 diseases and holding **eye** functions)

RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

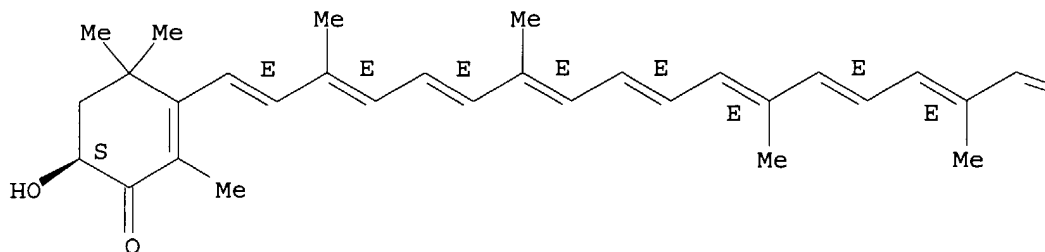
Absolute stereochemistry.



RN 472-61-7 HCAPLUS

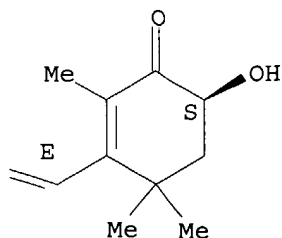
CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA  
 INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.



PAGE 1-A

PAGE 1-B



RN 1406-18-4 HCAPLUS  
 CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:598887 HCAPLUS  
 DN 137:324605  
 ED Entered STN: 12 Aug 2002  
 TI What is lutein, and what is its role in the macula?  
 AU Pratt, Steven  
 CS Scripps Memorial Hospital, La Jolla, CA, USA  
 SO Round Table Series - Royal Society of Medicine Press (2001),  
 73 (Age-Related Macular Degeneration (AMD) and Lutein: Assessing the  
 Evidence), 34-39  
 CODEN: RTMPFO; ISSN: 0268-3091  
 PB Royal Society of Medicine Press Ltd.  
 DT Journal; General Review  
 LA English  
 CC 18-0 (Animal Nutrition)  
 AB A review. The structural and biochem. differences between lutein and  
**zeaxanthin** and their biochem. and physiol. roles in the human  
**eye retina** macula functions are discussed. The dietary  
 lutein bioavailability, importance of dietary fat, and food sources of  
 lutein and **zeaxanthin** are also discussed.  
 ST review nutrition lutein **eye retina** macula biochem  
 physiol  
 IT **Eye**  
 (amacrine cell; dietary lutein biochem. and physiol. and role in  
**eye retina** macula function in humans)  
 IT Human  
 Nutrition, animal  
 (dietary lutein biochem. and physiol. and role in **eye**  
**retina** macula function in humans)  
 IT 127-40-2, Lutein **144-68-3, Zeaxanthin**  
 RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL  
 (Biological study); USES (Uses)  
 (dietary lutein biochem. and physiol. and role in **eye**  
**retina** macula function in humans)  
 RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE  
 (1) Bone, R; Invest Ophthalmol Vis Sci 1993, V34, P2033 MEDLINE  
 (2) Castenmiller, J; J Nutr 1999, V129, P349 HCAPLUS  
 (3) Faulks, R; Handbook of Nutraceutical and Functional Foods 2001, P143  
 HCAPLUS  
 (4) Richer, S; Invest Ophthalmol Vis Sci 2001, V42, PS706  
 (5) Sommerburg, O; Br J Ophthalmol 1998, V82, P907 MEDLINE  
 (6) Stahl, W; J Nutr 1992, V122, P2161 HCAPLUS  
 (7) Van den Berg, H; Nutr Rev 1999, V51(1), P1  
 IT **144-68-3, Zeaxanthin**

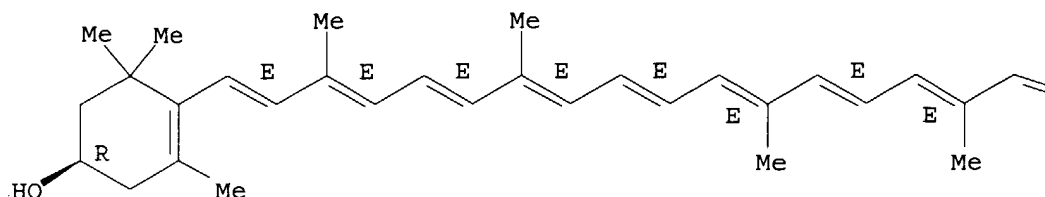
RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL  
(Biological study); USES (Uses)  
(dietary lutein biochem. and physiol. and role in **eye**  
**retina** macula function in humans)

RN 144-68-3 HCAPLUS

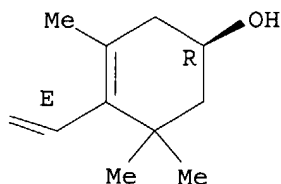
CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L114 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:184914 HCAPLUS

DN 136:236856

ED Entered STN: 15 Mar 2002

TI Method and composition for enhancing **vision** comprising vitamins  
and **alpha-lipoic acid**

IN Braswell, A. Glenn; Yegorova, Inna

PA USA

SO PCT Int. Appl., 30 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K035-00

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020028	A2	20020314	WO 2001-US27487	20010904 <--
WO 2002020028	A3	20030227		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2001088736	A5	20020322	AU 2001-88736	200109

PRAI US 2000-656375 A 20000906 <--  
 WO 2001-US27487 W 20010904 <--

## CLASS

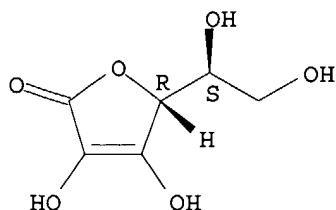
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

WO 2002020028 ICM A61K035-00

- AB The present invention relates to compns. and methods for preventing **eye** disorders by protecting cells from damaging effects of free radicals. The method involves administering to a subject a composition comprising **alpha-lipoic acid**, natural mixed **tocopherols**, **vitamin C**, citrus **bioflavonoids**, pine bark extract, lutein, natural mixed carotenoids and **vitamin A**. A capsule contained  $\alpha$  - **lipoic acid** 20, **vitamin C** 60, citrus biflavonoids 100, pine bark extract 30, lutein 60, natural mixed carotenoids 50 mg, natural mixed **tocopherols** 20, and **vitamin A** 800 IU. Effectiveness of the composition in the treatment of patients diagnosed with macular degeneration is shown.
- ST pharmaceutical capsule **vision** vitamin lipoic acid
- IT **Flavonoids**  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (**bioflavonoids**; method and composition for enhancing **vision** comprising vitamins and **alpha-lipoic acid**)
- IT Drug delivery systems  
 (capsules; method and composition for enhancing **vision** comprising vitamins and **alpha-lipoic acid**)
- IT **Eye, disease**  
 (**diabetic retinopathy**; method and composition for enhancing **vision** comprising vitamins and **alpha-lipoic acid**)
- IT Bark  
 (extract; method and composition for enhancing **vision** comprising vitamins and **alpha-lipoic acid**)
- IT **Eye, disease**  
 (macula, degeneration; method and composition for enhancing **vision** comprising vitamins and **alpha-lipoic acid**)
- IT **Antiglaucoma agents**  
**Cataract**  
 Human  
**Vision**  
 (method and composition for enhancing **vision** comprising vitamins and **alpha-lipoic acid**)
- IT **Carotenes, biological studies**  
**Flavonoids**  
 Proanthocyanidins  
**Tocopherols**  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (method and composition for enhancing **vision** comprising vitamins and **alpha-lipoic acid**)
- IT Drug delivery systems  
 (**ophthalmic**; method and composition for enhancing **vision** comprising vitamins and **alpha-lipoic acid**)
- IT 50-81-7, **Vitamin C**,, biological studies  
 127-40-2, Lutein, 1200-22-2,  $\alpha$  -**Lipoic acid** 11103-57-4, **Vitamin A**.  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (method and composition for enhancing **vision** comprising vitamins

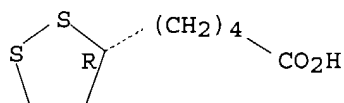
and **alpha-lipoic acid**)  
 IT 50-81-7, **Vitamin C**,, biological studies  
 1200-22-2,  **$\alpha$ -Lipoic acid**  
 11103-57-4, **Vitamin A**.  
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)  
 (method and composition for enhancing **vision** comprising vitamins  
 and **alpha-lipoic acid**)  
 RN 50-81-7 HCAPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1200-22-2 HCAPLUS  
 CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 11103-57-4 HCAPLUS  
 CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:56526 HCAPLUS  
 DN 136:101513  
 ED Entered STN: 22 Jan 2002  
 TI Health food containing animal liver, vitamins, and carotenoids  
 IN Itakura, Hiroshige; Yuan, Shi-hua; Yamashita, Eiji  
 PA Yamagami, Suehito, Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM A23L001-30  
 ICS A23L001-30; A23L001-302; A23L001-303; A61K031-59; A61K031-60;  
 A61K031-726; A61K035-407; A61K035-56; A61K035-78; A61K035-84;  
 A61K047-06; A61K047-10; A61K047-22; A61P027-04  
 CC 17-6 (Food and Feed Chemistry)  
 Section cross-reference(s): 1, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002017295	A2	20020122	JP 2000-203766	20000705 <--
PRAI	JP 2000-203766		20000705	<--	

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

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JP 2002017295 ICM A23L001-30  
 ICS A23L001-30; A23L001-302; A23L001-303; A61K031-59;  
 A61K031-60; A61K031-726; A61K035-407; A61K035-56;  
 A61K035-78; A61K035-84; A61K047-06; A61K047-10;  
 A61K047-22; A61P027-04

AB The health foods, which diminish symptoms of **eye** diseases and maintain **eye** functions, contain animal livers, vitamins and carotenoids as antioxidants, and optionally concentrated **blueberry** powder. Animal livers in Chinese medicine are known as drugs to normalize liver, kidney, and spleen functions, thus maintaining **eye** function. Other components, e.g. bat feces, Lycium chinense, ginseng, shiitake extract, chondroitin, etc., may be added. Effects of the health food were examined in patients with senile macular degeneration, diabetic retinopathy, **cataract**, etc.

ST **eye** function maintenance health food animal liver; vitamin carotenoid animal liver **eye** protection health food

IT Lentinula edodes  
 (extract; health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)

IT Chiroptera  
 (feces; health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)

IT Acer nikoense  
**Antioxidants**  
**Blueberry**  
 Cassia tora  
 Cornus officinalis  
**Eye**  
 Health food  
 Human  
 Liver  
 Lycium chinense  
 Panax notoginseng  
 Panax pseudoginseng  
 Plantago asiatica  
 Rehmannia glutinosa hueichingensis  
 (health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)

IT Vitamins  
 RL: FFD (Food or feed use); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)

IT **Carotenes, biological studies**  
 RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)

IT Cyprinus  
 Gloydius  
 Ovis aries  
 (liver; health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)

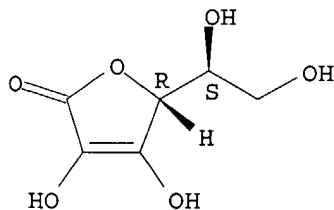
IT Microcapsules  
 (of carotenoids; health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)

IT Citrus  
 (peel powder; health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)

IT Lethenteron japonica  
 Pearl  
 (powder; health food containing animal liver, vitamins, and carotenoids to

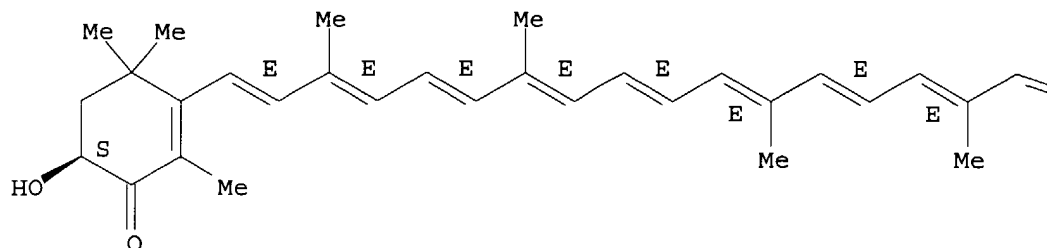
maintain **eye** function)  
 IT Salvia miltiorrhiza  
 (rhizome; health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)  
 IT Chrysanthemum morifolium  
 (white; health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)  
 IT 50-81-7, Vitamin C, biological studies  
 472-61-7, Astaxanthin 502-65-8, Lycopene  
 1406-18-4, Vitamin E 9007-27-6, Chondroitin  
 RL: FFD (Food or feed use); PAC (Pharmacological activity); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)  
 IT 50-81-7, Vitamin C, biological studies  
 472-61-7, Astaxanthin 1406-18-4,  
 Vitamin E  
 RL: FFD (Food or feed use); PAC (Pharmacological activity); THU  
 (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (health food containing animal liver, vitamins, and carotenoids to maintain **eye** function)  
 RN 50-81-7 HCAPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 472-61-7 HCAPLUS  
 CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA INDEX NAME)

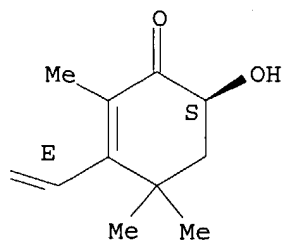
Absolute stereochemistry.  
 Double bond geometry as shown.



PAGE 1-A



PAGE 1-B



RN 1406-18-4 HCAPLUS  
 CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:833104 HCAPLUS  
 DN 135:362607  
 ED Entered STN: 16 Nov 2001  
 TI Preparation for the prevention and treatment of **ocular** disorders  
 IN Verdegem, Peter Julien Edward  
 PA N.V. Nutricia, Neth.  
 SO PCT Int. Appl., 9 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K035-00  
 CC 63-6 (Pharmaceuticals)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001085183	A2	20011115	WO 2001-NL348	20010508 <--
	WO 2001085183	A3	20020815		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRAI	US 2000-566385	A	20000508 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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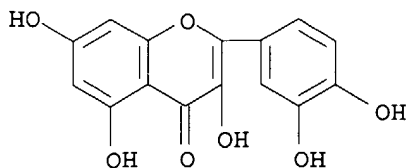
WO 2001085183	ICM	A61K035-00
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AB The present invention relates to a preparation for the prevention and/or treatment of **ocular** disorders which comprises: a. an aldose reductase inhibitor; b. an **intraocular** pressure lowering component; and c. a component that increases **ocular** blood flow. Component a can be Chrysanthemum morifolium, Bixa orellana, Ipomoea batatas **Vaccinium** myrtillus, Buddleia officinalis, Cistanche salsa or Glycyrrhiza glabra ext. Component b can be a **green tea** ext., myrecetin, querecetin or tannin. Component c can be an isoflavone or a water sol. carotenoid.

ST **eye** disorder compn; aldose reductase inhibitor **eye** disorder compn; **intraocular** pressure lowering **eye** disorder compn

IT **Tea** products

- (beverages, green, exts.; composition for the prevention and treatment of **ocular disorders**)
- IT Annatto  
Buddleia officinalis  
**Cataract**  
Chrysanthemum morifolium  
Cistanche salsa  
**Glaucoma (disease)**  
Licorice (Glycyrrhiza glabra)  
Sweet potato  
**Vaccinium myrtillus**  
(composition for the prevention and treatment of **ocular disorders**)
- IT Tannins  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(composition for the prevention and treatment of **ocular disorders**)
- IT **Carotenes, biological studies**  
Glycosides  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composition for the prevention and treatment of **ocular disorders**)
- IT Flavones  
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); OCCU (Occurrence); USES (Uses)  
(isoflavones; composition for the prevention and treatment of **ocular disorders**)
- IT **Eye, disease**  
(macula, degeneration; composition for the prevention and treatment of **ocular disorders**)
- IT Drug delivery systems  
(**ophthalmic**; composition for the prevention and treatment of **ocular disorders**)
- IT **Antioxidants**  
(pharmaceutical; composition for the prevention and treatment of **ocular disorders**)
- IT 87-66-1, Pyrogallol 92-61-5, Scopoletin 117-39-5, **Quercetin** 149-91-7, Gallic acid, biological studies 331-39-5, Caffeic acid 476-66-4, Ellagic acid 480-44-4, Acacetin 491-70-3, Luteolin 520-34-3, Diosmetin 529-44-2, Myricetin 970-74-1, Epigallocatechin 989-51-5, Epigallocatechin gallate 2450-53-5, 3,5-Dicaffeoylquinic acid 3681-99-0, Puerarin 27876-94-4, Crocetin 39465-00-4, Crocin 41440-05-5, Isoscutellarein  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composition for the prevention and treatment of **ocular disorders**)
- IT 9028-31-3, Aldose reductase  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; composition for the prevention and treatment of **ocular disorders**)
- IT **117-39-5, Quercetin**  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(composition for the prevention and treatment of **ocular disorders**)
- RN 117-39-5 HCAPLUS
- CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI)  
(CA INDEX NAME)



L114 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:545461 HCAPLUS  
 DN 135:127168  
 ED Entered STN: 27 Jul 2001  
 TI Reduced form of coenzyme Q in highly bioavailable stable dosage forms  
 IN Chopra, Raj K.  
 PA USA  
 SO PCT Int. Appl., 50 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K009-48  
 ICS A61K009-66; A61K009-64; A61K009-20  
 CC 63-5 (Pharmaceuticals)  
 Section cross-reference(s): 17, 62  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001052822	A1	20010726	WO 2001-US1997	20010118 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6740338	B1	20040525	US 2000-488332	20000120 <--
EP 1251834	A1	20021030	EP 2001-942547	20010118 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI US 2000-488332	A	20000120 <--		
US 2000-637559	A	20000811 <--		
WO 2001-US1997	W	20010118 <--		

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001052822	ICM	A61K009-48
	ICS	A61K009-66; A61K009-64; A61K009-20
(US 6740338)	ECLA	A61K009/00M6; A61K009/48H4

OS MARPAT 135:127168

AB The present invention relates to a reduced form of coenzyme Q also known as ubiquinol in a pharmaceutical or cosmetic dosage form, preferably an oral dosage form such as a gelatin capsule. Compns. according to the present invention show high bioavailability of the reduced form of Coenzyme Q. The present invention relates to storage stable compns. comprising effective amts. of ubiquinol in combination with an amount of a reducing agent effective to maintain ubiquinol in its reduced state when formulated as in, e.g., capsules, tablets and other orally administrable form. A capsule formulation contained **vitamin E** acetate 6, hydroxylated lecithin 4, phosphatidylcholine 32, medium-chain triglyceride 20, Gelucire 30, coenzyme Q10 4, and ascorbyl palmitate 4%.

ST coenzyme Q reduced stable dosage form; ubiquinol stable dosage form; cosmetic coenzyme Q reduced

IT Brain, disease  
 (Alper's disease; bioavailable stable dosage forms containing ubiquinol)

IT Muscle, disease  
 (Kearns-Sayre syndrome; bioavailable stable dosage forms containing ubiquinol)

IT Brain, disease  
 (MELAS (mitochondrial myopathy, encephalopathy, lactic acidosis, and

stroke-like episodes); bioavailable stable dosage forms containing ubiquinol)

IT Algae

Anticholesteremic agents

Antihypertensives

Blood pressure

Dentifrices

Hypercholesterolemia

Hypoxia, animal

Immune system

Mouthwashes

Solubilizers

Surfactants

(bioavailable stable dosage forms containing ubiquinol)

IT Castor oil

Coconut oil

Cottonseed oil

**Flavonoids**

Linseed oil

Palm oil

Proanthocyanidins

Rape oil

Safflower oil

Soybean oil

Sunflower oil

**Tocopherols**

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(bioavailable stable dosage forms containing ubiquinol)

IT Rice (Oryza sativa)

(bran; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems

(capsules, soft; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems

(capsules; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems

(chewing gums; bioavailable stable dosage forms containing ubiquinol)

IT Cosmetics

(creams; bioavailable stable dosage forms containing ubiquinol)

IT Nervous system

(degeneration; bioavailable stable dosage forms containing ubiquinol)

IT Ketones, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(diketones, unsatd., curcuminoids; bioavailable stable dosage forms containing ubiquinol)

IT Periodontium

(disease; bioavailable stable dosage forms containing ubiquinol)

IT **Bilberry**

(**extract**; bioavailable stable dosage forms containing ubiquinol)

IT Silybum marianum

(exts.; bioavailable stable dosage forms containing ubiquinol)

IT Heart, disease

(failure; bioavailable stable dosage forms containing ubiquinol)

IT Fats and Glyceridic oils, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(fish; bioavailable stable dosage forms containing ubiquinol)

IT **Eye, disease**

(hereditary optic atrophy; bioavailable stable dosage forms containing ubiquinol)

IT Acidosis

(lactic; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems

(lotions; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems

(lozenges; bioavailable stable dosage forms containing ubiquinol)

IT Glycerides, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (medium-chain; bioavailable stable dosage forms containing ubiquinol)

IT Brain, disease  
 (mitochondrial encephalopathy; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems  
 (ointments, creams; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems  
 (oral; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems  
 (parenterals; bioavailable stable dosage forms containing ubiquinol)

IT **Fatty acids, biological studies**  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (polyunsatd., n-3; bioavailable stable dosage forms containing ubiquinol)

IT Ubiquinones  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (reduced; bioavailable stable dosage forms containing ubiquinol)

IT Bran  
 (rice; bioavailable stable dosage forms containing ubiquinol)

IT Brain, disease  
 (stroke; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems  
 (suppositories; bioavailable stable dosage forms containing ubiquinol)

IT Drug delivery systems  
 (tablets; bioavailable stable dosage forms containing ubiquinol)

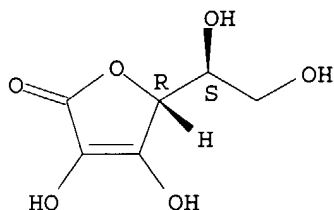
IT Drug delivery systems  
 (topical; bioavailable stable dosage forms containing ubiquinol)

IT Fats and Glyceridic oils, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (vegetable; bioavailable stable dosage forms containing ubiquinol)

IT 50-81-7, vitamin C, biological studies  
 50-81-7D, vitamin C, esters 52-90-4,  
 L-Cysteine, biological studies 53-57-6, NADPH 56-81-5, Glycerin,  
 biological studies 57-55-6, Propylene glycol, biological studies  
 58-68-4, NADH 58-95-7, Vitamin E acetate 59-02-9,  
 D- $\alpha$ -Tocopherol 59-02-9D,  $\alpha$ -Tocopherol,  
 esters 64-17-5, Ethanol, biological studies 68-26-8, Retinol  
 68-26-8D, vitamin A, esters 70-18-8,  
 Reduced glutathione, biological studies 83-88-5, Riboflavin,  
 biological studies 98-92-0, Niacinamide 116-31-4,  
 Retinal 127-40-2, Lutein 127-47-9, Retinol acetate 137-66-6,  
 Ascorbyl palmitate 144-68-3, Zeaxanthin 151-21-3,  
 Sodium lauryl sulfate, biological studies 302-79-4, Retinoic acid  
 302-79-4D, Retinoic acid, esters 303-98-0, Coenzyme Q10 432-70-2,  
 $\alpha$ -Carotene 472-61-7, Astaxanthin 501-36-0,  
 Resveratrol 502-65-8, Lycopene 541-15-1, L-Carnitine 616-91-1  
 , N-Acetylcysteine 992-78-9, reduced Coenzyme Q10  
 1200-22-2D,  $\alpha$ -Lipoic acid,  
 reduced 1338-43-8, Span 80 1406-18-4, vitamin  
 E 1406-18-4D, vitamin E, esters  
 3040-38-8, Acetyl L-carnitine 6829-55-6D, tocotrienol, derivs.  
 7235-40-7,  $\beta$ -Carotene 7439-95-4, Magnesium, biological studies  
 7439-96-5, Manganese, biological studies 7440-66-6, Zinc, biological  
 studies 7782-49-2, Selenium, biological studies 9005-65-6, Tween 80  
 20064-19-1, Propionyl L-carnitine 73573-88-3, Mevastatin 75330-75-5,  
 Lovastatin 79902-63-9, Simvastatin 81093-37-0, Pravastatin  
 93957-54-1, Fluvastatin 93957-55-2, Fluindostatin 220349-64-4,  
 L-Carnitine fumarate, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (bioavailable stable dosage forms containing ubiquinol)

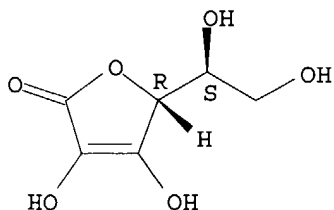
IT 9028-35-7  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (inhibitors; bioavailable stable dosage forms containing ubiquinol)  
 RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE  
 (1) Borowy-Borowski; US 6045826 A 2000 HCAPLUS  
 (2) Pozzi; US 4869900 A 1989 HCAPLUS  
 IT 50-81-7, **vitamin C**, biological studies  
 50-81-7D, **vitamin C**, esters 68-26-8,  
 Retinol 68-26-8D, **vitamin A**, esters  
 70-18-8, Reduced **glutathione**, biological studies  
 98-92-0, Niacinamide 144-68-3, **Zeaxanthin**  
 472-61-7, **Astaxanthin** 616-91-1, N-  
**Acetylcysteine** 1200-22-2D,  $\alpha$  -  
**Lipoic acid**, reduced 1406-18-4,  
**vitamin E** 1406-18-4D, **vitamin**  
**E**, esters  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (bioavailable stable dosage forms containing ubiquinol)  
 RN 50-81-7 HCAPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



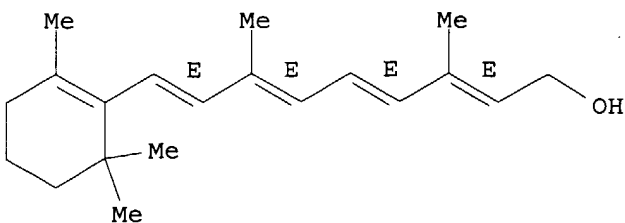
RN 50-81-7 HCAPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



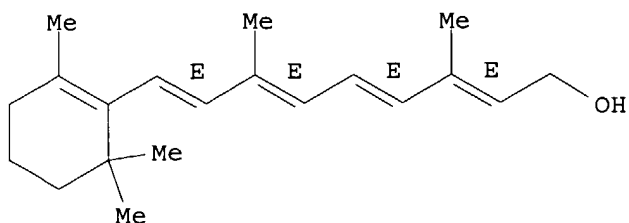
RN 68-26-8 HCAPLUS  
 CN Retinol (9CI) (CA INDEX NAME)

Double bond geometry as shown.



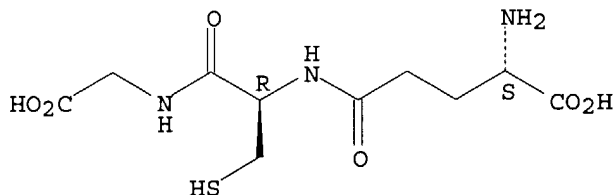
RN 68-26-8 HCAPLUS  
 CN Retinol (9CI) (CA INDEX NAME)

Double bond geometry as shown.

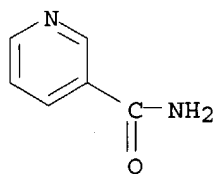


RN 70-18-8 HCAPLUS  
 CN Glycine, L-γ-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



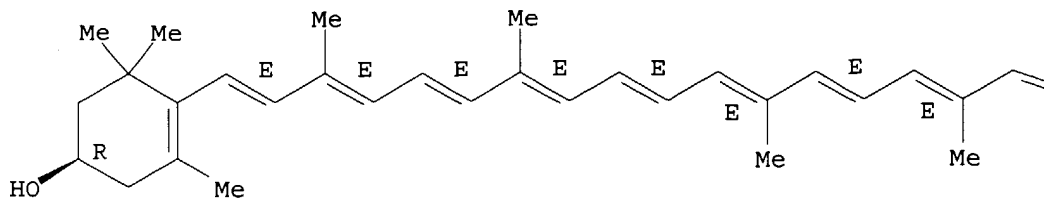
RN 98-92-0 HCAPLUS  
 CN 3-Pyridinecarboxamide (9CI) (CA INDEX NAME)



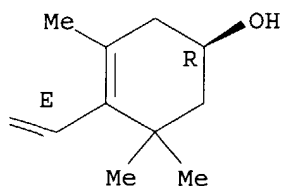
RN 144-68-3 HCAPLUS  
 CN β,β-Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

PAGE 1-A



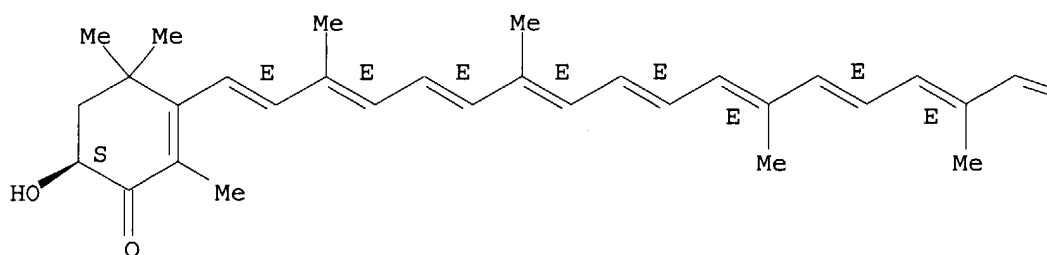
PAGE 1-B



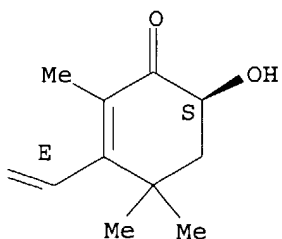
RN 472-61-7 HCAPLUS  
 CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

PAGE 1-A

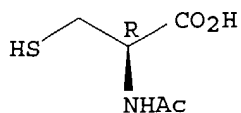


PAGE 1-B



RN 616-91-1 HCAPLUS  
 CN L-Cysteine, N-acetyl- (9CI) (CA INDEX NAME)

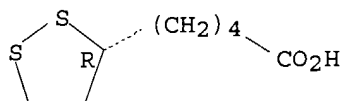
Absolute stereochemistry.



RN 1200-22-2 HCAPLUS  
 CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).





RN 1406-18-4 HCAPLUS  
CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 1406-18-4 HCAPLUS  
CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:480612 HCAPLUS

DN 135:81991

ED Entered STN: 04 Jul 2001

TI Nutraceutical oral composition containing serine protease inhibitors for protection against solar radiation

IN Bragaglia, Anthony Joseph

PA Protective Factors, Inc., USA

SO U.S., 8 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K007-42

ICS A61K007-44; A61K035-78; A61K039-385; A01N065-00

NCL 424729000

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1, 18

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6254898	B1	20010703	US 2000-578596	20000525 <--
PRAI US 2000-578596		20000525 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6254898	ICM	A61K007-42
	ICS	A61K007-44; A61K035-78; A61K039-385; A01N065-00
	NCL	424729000

AB A nutraceutical oral composition, for the inhibition of photochem. damage to the skin and **eyes** induced by sunlight, particularly by exposure to UV radiation is disclosed. The blend is multifunctional and comprises a blend of chemopreventive natural products, which exert anti-radical mechanisms of prevention and intervention, anti-**inflammatory** effects, enhance the endogenous defense mechanisms, and also have the potential to reduce the radiation induced pigmentation. The active ingredients in the blend include **green tea** extract, lutein (**zeaxanthin**), lipoic acid, and selenomethionine. The blend showed a potent trypsin inhibitory activity over the concentration range

of 0.01-0.00001%, and the IC50 was 0.175 mg.

ST lipoate lutein polyphenol selenium capsule photodamage; serine protease inhibitor antioxidant **antiinflammatory** skin **eye**; **green tea** ext polyphenol capsule photodamage

IT Drug delivery systems

(capsules; nutraceutical oral composition containing serine protease inhibitors

for inhibition of photochem. damage to skin and **eyes**)

IT **Tea products**  
(**green**, exts.; nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

IT **Anti-inflammatory agents**  
**Eye**  
Radiation damage  
Radical scavengers  
Skin  
UV radiation  
(nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

IT **Antioxidants**  
(pharmaceutical; nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

IT **Phenols, biological studies**  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(**polyphenols, nonpolymeric, green tea** exts.; nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

IT 9002-07-7, Trypsin  
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)  
(III; nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

IT 9004-06-2, Elastase 37259-58-8, Serine protease 56645-49-9, Cathepsin G  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

IT 11062-77-4, Superoxide  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

IT 127-40-2, Lutein **144-68-3, Zeaxanthin**  
**1200-22-2**, Lipoic acid 1464-42-2, Selenomethionine 7782-49-2D, Selenium, compds., biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE  
(1) Anon; JP 402096142 A 1990  
(2) Anon; WO 9422322 1994 HCAPLUS  
(3) Anon; WO 9628178 1996 HCAPLUS  
(4) Bombardelli; US 6096359 2000 HCAPLUS  
(5) Fujie; US 5498412 1996  
(6) No; Life Sciences 1999, V65(21), PPL241 HCAPLUS  
(7) Riley; US 5948443 1999 HCAPLUS  
(8) Riley; US 5976568 1999 HCAPLUS  
(9) Todd; US 5527552 1996 HCAPLUS

IT **144-68-3, Zeaxanthin 1200-22-2, Lipoic acid**  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(nutraceutical oral composition containing serine protease inhibitors for inhibition of photochem. damage to skin and **eyes**)

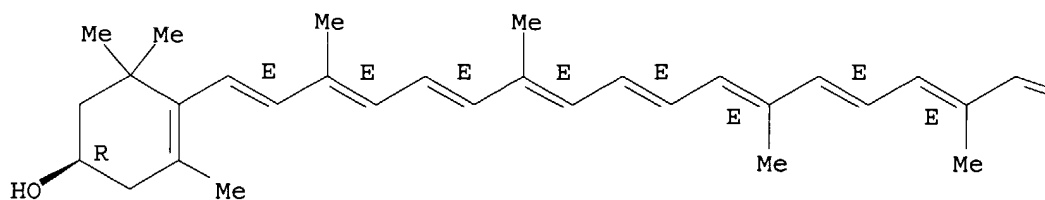
RN 144-68-3 HCAPLUS

CN  $\beta$ , $\beta$ -Carotene-3,3'-diol, (3R,3'R)-(9CI) (CA INDEX NAME)

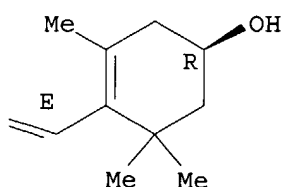
Absolute stereochemistry.

Double bond geometry as shown.

PAGE 1-A



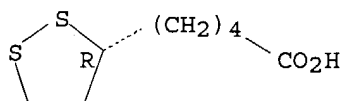
PAGE 1-B



RN 1200-22-2 HCAPLUS

CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L114 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:300514 HCAPLUS

DN 134:331617

ED Entered STN: 27 Apr 2001

TI Oil-in-water emulsion compositions for polyfunctional active ingredients

IN Chen, Feng-jing; Patel, Mahesh V.

PA Lipocine, Inc., USA

SO PCT Int. Appl., 82 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-355

ICS A61K031-20

CC 63-6 (Pharmaceuticals)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028555	A1	20010426	WO 2000-US28835	20001018 <--
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

US 2002107265 A1 20020808 US 1999-420159 19991018 <--  
 US 6720001 B2 20040413  
 PRAI US 1999-420159 A 19991018 <--

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001028555	ICM	A61K031-355
	ICS	A61K031-20
US 2002107265	ECLA	A61K009/107D; A61K031/355; A61K031/20
AB	Pharmaceutical oil-in-water emulsions for delivery of polyfunctional active ingredients with improved loading capacity, enhanced stability, and reduced irritation and local toxicity are described. Emulsions include an aqueous phase, an oil phase comprising a structured triglyceride, and an emulsifier. The structured triglyceride of the oil phase is substantially free of triglycerides having three medium chain (C6-C12) fatty acid moieties, or a combination of a long chain triglyceride and a polarity-enhancing polarity modifier. The present invention also provides methods of treating an animal with a polyfunctional active ingredient, using dosage forms of the pharmaceutical emulsions. For example, an emulsion was prepared, with cyclosporin A as the polyfunctional active ingredient dissolved in an oil phase including a structured triglyceride (Captex 810D) and a long chain triglyceride (safflower oil). The composition contained (by weight) cyclosporin A 1.0, Captex 810D 5.0, safflower oil 5.0, BHT 0.02, egg phospholipid 2.4, dimyristoylphosphatidyl glycerol 0.2, glycerol 2.25, EDTA 0.01, and water up to 100%, resp.	
ST	glyceride emulsion polyfunctional drug delivery	
IT	Vaccines (Haemophilus influenzae type B; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Monoglycerides RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (acetates; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Ubiquinones RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (acetyl; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Lung Lymphatic system Mucous membrane (administration by; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Drug delivery systems (aerosols; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Fats and Glyceridic oils, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (almond; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Peptides, biological studies Proteins, general, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (amphiphilic; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Fats and Glyceridic oils, biological studies RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (animal; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Proteins, specific or class RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (apoproteins; oil-in-water emulsion compns. for polyfunctional active ingredients)	
IT	Fats and Glyceridic oils, biological studies	

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(babassu; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Natural products, pharmaceutical  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(belladonna; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(borage seed; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Drug delivery systems  
(buccal, drops and sprays; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Lipids, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(cationic; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Uterus  
(cervix, drops and sprays for; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Vaccines  
(cholera; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Gonadotropins  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(chorionic; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(currant, Ribes nigrum seed; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Bath preparations  
(douches; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Drug delivery systems  
(elixirs; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(emu; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Drug delivery systems  
(emulsions; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Drug delivery systems  
(enteric; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Fatty acids, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(essential; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Fatty acids, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(esters, lower alc.; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Corn oil  
Diglycerides  
Fatty acids, biological studies  
Glycerides, biological studies  
Monoglycerides  
Sterols  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

- (ethoxylated; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(evening primrose; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Alcohols, biological studies  
Amines, biological studies  
Quaternary ammonium compounds, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(fatty; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(fish; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems  
(gels; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(**grape seed**; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Mucopolysaccharides, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(heparinoids; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Vaccines  
(**hepatitis A**, inactivated; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Vaccines  
(**hepatitis B**, inactivated; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Castor oil  
Coconut oil  
Cottonseed oil  
Palm oil  
Soybean oil  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(hydrogenated; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Vaccines  
(influenza; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems  
(inhalants; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems  
(injections, i.m.; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems  
(injections, i.v.; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems  
(injections; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems  
(liniments; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems  
(lotions; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Vaccines

(measles; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Osmotic pressure  
(modifiers; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Vaccines  
(mumps; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(mustard; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Drug delivery systems  
(nasal sprays; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Drug delivery systems  
(nasal; oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Antibacterial agents  
Beverages  
Buffers  
Chelating agents  
Coloring materials  
Emulsifying agents  
Encapsulation  
Evaporation  
Extrusion, nonbiological  
Filtration  
Flavoring materials  
Freeze drying  
Homogenization  
Melting  
Mixing  
Odor and Odorous substances  
Partition  
Preservatives  
Radiation  
Size reduction  
Solubilization  
Solubilizers  
Solvents  
Sonication  
Spraying  
Sterilization and Disinfection  
Vaccines  
(oil-in-water emulsion compns. for polyfunctional active ingredients)

IT Acids, biological studies  
Bases, biological studies  
Bile acids  
Bile salts  
Canola oil  
Carbohydrates, biological studies  
**Carotenes, biological studies**  
Castor oil  
Ceramides  
Coconut oil  
Corn oil  
Cottonseed oil  
Enkephalins  
Fatty acids, biological studies  
Glycerides, biological studies  
Glycolipids  
Interleukin 2

Interleukin 3  
 Linseed oil  
 Lipoproteins  
 Lysophospholipids  
 Monoglycerides  
 Olive oil  
 Palm kernel oil  
 Palm oil  
 Peanut oil  
 Phosphatidic acids  
 Phosphatidylcholines, biological studies  
 Phosphatidylethanolamines, biological studies  
 Phosphatidylglycerols  
 Phosphatidylinositols  
 Phosphatidylserines  
 Phospholipids, biological studies  
 Polymers, biological studies  
 Polyoxyalkylenes, biological studies  
 Rape oil  
 Safflower oil  
 Soybean oil  
 Sphingomyelins  
 Sphingosines  
 Sunflower oil  
 Trace elements, biological studies  
 Tumor necrosis factors  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (oil-in-water emulsion compns. for polyfunctional active ingredients)  
 IT Drug delivery systems  
 (ointments, creams; oil-in-water emulsion compns. for polyfunctional  
 active ingredients)  
 IT Drug delivery systems  
 (**ophthalmic**; oil-in-water emulsion compns. for polyfunctional  
 active ingredients)  
 IT Drug delivery systems  
 (parenterals; oil-in-water emulsion compns. for polyfunctional active  
 ingredients)  
 IT Drug delivery systems  
 (pastes; oil-in-water emulsion compns. for polyfunctional active  
 ingredients)  
 IT **Antioxidants**  
 (pharmaceutical; oil-in-water emulsion compns. for polyfunctional  
 active ingredients)  
 IT Infection  
 (plague, vaccine against; oil-in-water emulsion compns. for  
 polyfunctional active ingredients)  
 IT Growth factors, animal  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (platelet-derived human; oil-in-water emulsion compns. for  
 polyfunctional active ingredients)  
 IT Vaccines  
 (pneumococcal, polyvalent; oil-in-water emulsion compns. for  
 polyfunctional active ingredients)  
 IT Alcohols, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (polyhydric; oil-in-water emulsion compns. for polyfunctional active  
 ingredients)  
 IT Fatty acids, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (polyunsatd., triglycerides; oil-in-water emulsion compns. for  
 polyfunctional active ingredients)  
 IT Drug delivery systems  
 (rectal; oil-in-water emulsion compns. for polyfunctional active



- ingredients)
- IT Fats and Glyceridic oils, biological studies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (sesame; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Fats and Glyceridic oils, biological studies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (shark-liver oil; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (solns., nasal; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (solns., **ophthalmic**; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (solns.; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Phospholipids, biological studies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (soya; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (sprays, **ophthalmic**; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (sublingual; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (suppositories, vaginal; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (suppositories; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (tinctures; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (topical; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Drug delivery systems
  - (transdermal; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Human poliovirus
  - (vaccine containing inactivated and live; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Human herpesvirus 3
  - Japanese **encephalitis** virus
  - Mycobacterium BCG
  - Neisseria meningitidis
  - Rabies virus
  - Rotavirus
  - Salmonella typhi
  - Yellow fever virus
  - (vaccine; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Infection
  - (variola, vaccine; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Fats and Glyceridic oils, biological studies
  - RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (vegetable, ethoxylated; oil-in-water emulsion compns. for polyfunctional active ingredients)

- IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(vegetable, hydrogenated; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Fats and Glyceridic oils, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(vegetable; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Interferons  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( $\alpha$ ; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT Interferons  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( $\beta$ ; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT 111-87-5, Octanol, properties  
RL: PRP (Properties)  
(-water partition; oil-in-water emulsion compns. for polyfunctional active ingredients)
- IT 50-14-6, **Ergocalciferol** 50-21-5D, Lactic acid, glycerides  
50-24-8, Prednisolone 50-28-2, Estradiol, biological studies 50-34-0,  
Propantheline bromide 50-56-6, Oxytocin, biological studies 50-70-4,  
Sorbitol, biological studies 51-15-0, Pralidoxime chloride 51-43-4,  
Epinephrine 51-48-9, L-Thyroxine, biological studies 51-55-8,  
Atropine, biological studies 51-60-5, Neostigmine methyl sulfate  
52-01-7, Spironolactone 52-24-4, Thiotepa 55-98-1, Busulfan 56-81-5,  
Glycerol, biological studies 57-13-6, Urea, biological studies  
57-22-7, Vincristine 57-55-6, Propylene glycol, biological studies  
57-55-6D, Propylene glycol, fatty acid esters 57-64-7, Physostigmine  
salicylate 57-83-0, Progesterone, biological studies 57-88-5,  
Cholesterol, biological studies 57-88-5D, Cholesterol, fatty acid esters  
and polyethoxylated 57-94-3, Tubocurarine chloride 59-05-2,  
Methotrexate 60-31-1, Acetylcholine chloride 62-31-7, Dopamine  
hydrochloride 63-91-2, Phenylalanine, biological studies 64-17-5,  
Ethanol, biological studies 65-28-1, Phentolamine mesylate 66-76-2,  
Dicoumarol 67-20-9, Nitrofurantoin 67-45-8, Furazolidone 67-96-9,  
Dihydrotachysterol 67-97-0, **Cholecalciferol** 68-19-9, Vitamin  
B12 69-65-8, D-Mannitol 70-51-9, Deferoxamine 71-27-2, Suxamethonium  
chloride 74-89-5, Methanamine, biological studies 76-57-3, Codeine  
76-90-4, Mepenzolate bromide 76-99-3, Methadone 77-19-0, Dicyclomine  
83-44-3, Deoxycholic acid 87-33-2, Isosorbide dinitrate 89-57-6,  
Mesalamine 101-26-8, Pyridostigmine bromide 104-31-4, Benzonatate  
107-21-1, Ethylene glycol, biological studies 112-80-1, Oleic acid,  
biological studies 113-15-5, Ergotamine 113-92-8, Chlorpheniramine  
114-07-8, Erythromycin 114-80-7, Neostigmine bromide 115-77-5,  
Pentaerythritol, biological studies 121-44-8, Triethylamine, biological  
studies 122-32-7, Glyceryl trioleate 125-84-8, Aminogluthethimide  
126-07-8, Griseofulvin 129-06-6, Warfarin sodium 131-49-7, Diatrizoate  
meglumine 140-64-7, Pentamidine isethionate 147-94-4, Cytarabine  
154-21-2, Lincomycin 155-97-5, Pyridostigmine 298-46-4,  
5H-Dibenz[b,f]azepine-5-carboxamide 298-57-7, Cinnarizine 298-81-7,  
Methoxsalen 299-42-3, Ephedrine 300-62-9, Amphetamine 302-79-4,  
Tretinoin 303-49-1, Clomipramine 321-64-2, Tacrine 359-83-1,  
Pentazocine **378-44-9**, Betamethasone 404-86-4, Capsaicin  
437-38-7, Fentanyl 443-48-1, Metronidazole 502-65-8, Lycopene  
511-12-6, Dihydroergotamine 520-85-4, Medroxyprogesterone 537-40-6,  
Glyceryl trilinoleate 541-15-1, Carnitine 595-33-5 596-51-0,  
Glycopyrrolate **616-91-1**, **Acetylcysteine** 665-66-7,  
Amantadine hydrochloride 737-31-5, Diatrizoate sodium 865-21-4,  
Vinblastin 911-45-5, Clomiphene 1115-70-4, Metformin hydrochloride  
1134-47-0, Baclofen 1264-72-8, Colistin sulfate 1319-82-0,  
Aminocaproic acid 1397-89-3, Amphotericin B 1403-66-3, Gentamycin

1404-90-6, Vancomycin 1405-20-5, Polymixin B sulfate 1405-37-4,  
 Capreomycin sulfate 1405-87-4, Bacitracin 1406-16-2,  
**Vitamin D 1406-18-4, Vitamin**  
**E** 1492-18-8, Leucovorin calcium 1501-84-4, Rimantadine  
 hydrochloride 1684-40-8, Tacrine hydrochloride 1695-77-8,  
 Spectinomycin 1951-25-3, Amiodarone 1972-08-3, Tetrahydrocannabinol  
 2016-88-8, Amiloride hydrochloride 3056-17-5, Stavudine 3485-62-9,  
 Clidinium bromide 3778-73-2, Isofosfamide 3930-20-9, Sotalol  
 4291-63-8, Cladribine 4419-39-0, Beclomethasone 4759-48-2,  
 Isotretinoin 5104-49-4, Flurbiprofen 5534-95-2, Pentagastrin  
 6493-05-6, Pentoxifylline 6990-06-3, Fusidic acid 7261-97-4,  
 Dantrolene 7414-83-7, Etidronate disodium 7481-89-2, Zalcitabine  
 7648-98-8, Ambenonium 7689-03-4, Camptothecin 8068-28-8,  
 Colistimethate sodium 9001-28-9, Factor IX 9002-01-1, Streptokinase  
 9002-60-2, Corticotropin, biological studies 9004-17-5, NPH insulin  
 9005-07-6, PEG 400 dioleate 9005-63-4D, fatty acid esters 9007-48-1,  
 Plurol Oleique CC497 9007-92-5, Glucagon, biological studies  
 9015-68-3, Asparaginase 9034-40-6, Gonadotropin releasing hormone  
 9039-53-6, Urokinase 9041-08-1, Dalteparin sodium 9041-93-4, Bleomycin  
 sulfate 9087-70-1, Aprotinin 10238-21-8, Glyburide 10540-29-1,  
 Tamoxifen 10596-23-3, Clodronic acid 11000-17-2, Vasopressin  
 11061-68-0, Human insulin 11103-57-4, **Vitamin**  
**A** 11140-04-8, Imwitor 988 12001-79-5, Vitamin K 12584-58-6,  
 Insulin porcine 12619-70-4, Cyclodextrin 12629-01-5, Human growth  
 hormone 13265-10-6, Methscopolamine 14465-68-0, Glyceryl trilinolenate  
 15307-86-5, Diclofenac 15500-66-0, Pancuronium bromide 15574-96-6,  
 Pizotifen 15663-27-1, Cisplatin 15686-51-8, Clemastine 15686-71-2,  
 Cephalixin 15687-27-1, Ibuprofen 15826-37-6, Cromolyn sodium  
 16679-58-6, Desmopressin 16960-16-0, Cosyntropin 17230-88-5, Danazol  
 18323-44-9, Clindamycin 18559-94-9, Albuterol 18883-66-4, Streptozocin  
 19356-17-3, Calcifediol 20537-88-6, Amifostine 20594-83-6, Nalbuphine  
 20830-75-5, Digoxin 21215-62-3, Human calcitonin 21256-18-8, Oxaprozin  
 21679-14-1, Fludarabine 21829-25-4, Nifedipine 22254-24-6, Ipratropium  
 bromide 22916-47-8, Miconazole 23031-32-5, Terbutaline sulfate  
 23214-92-8, Doxorubicin 23288-49-5, Probuco 24356-60-3, Cephapirin  
 sodium 25126-32-3, Sincalide 25322-68-3, Polyethylene glycol  
 25322-69-4, Polypropylene glycol 25523-97-1, Dexchlorpheniramine  
 25618-55-7, Polyglycerol 25812-30-0, Gemfibrozil 26839-75-8, Timolol  
 27164-46-1, Cefazolin sodium 27203-92-5, Tramadol 29094-61-9,  
 Glipizide 29122-68-7, Atenolol 29767-20-2, Teniposide 30516-87-1,  
 Zidovudine 32222-06-3, Calcitriol 33069-62-4, Paclitaxel 33419-42-0,  
 Etoposide 33515-09-2, Gonadorelin 33564-30-6, Cefoxitin sodium  
**34787-01-4**, Ticarcillin 34911-55-2, Bupropion 36791-04-5,  
 Ribavirin 37220-82-9, Peceol 37321-62-3, Lauroglycol FCC 38304-91-5,  
 Minoxidil 39809-25-1, Penciclovir 41340-25-4, Etodolac 41575-94-4,  
 Carboplatin 42057-22-7, Mezlocillin sodium 42540-40-9, Cefamandole  
 nafate 42924-53-8, Nabumetone 43200-80-2, Zopiclone 47931-85-1,  
 Calcitonin salmon 49562-28-9, Fenofibrate 49697-38-3, Rimexolone  
 50700-72-6, Vecuronium bromide 51110-01-1, Somatostatin 51322-75-9,  
 Tizanidine 51333-22-3, Budesonide 51384-51-1, Metoprolol 51481-61-9,  
 Cimetidine 53123-88-9, Sirolimus 53179-11-6, Loperamide 53230-10-7,  
 Mefloquine 53910-25-1, Pentostatin 54063-53-5, Propafenone  
 54910-89-3, Fluoxetine 54965-21-8, Albendazole 55079-83-9, Acitretin  
 55142-85-3, Ticlopidine 56180-94-0, Acarbose 57248-88-1, Pamidronate  
 disodium 59277-89-3, Acyclovir 59467-70-8, Midazolam 59703-84-3,  
 Piperacillin sodium 59865-13-3, Cyclosporin A  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (oil-in-water emulsion compns. for polyfunctional active ingredients)  
 IT 60142-96-3, Gabapentin 61270-78-8, Cefonicid sodium 61361-72-6,  
 Dimyristoylphosphatidyl glycerol 61379-65-5, Rifapentine 61489-71-2,  
 Menotropin 61869-08-7, Paroxetine 62013-04-1, Dirithromycin  
 62356-64-3 62893-19-0, Cefoperazone 63527-52-6, Cefotaxime  
 63585-09-1, Foscarnet sodium 63590-64-7, Terazosin 63612-50-0,

Nilutamide 63675-72-9, Nisoldipine 64228-81-5, Atracurium besylate  
 64544-07-6, Cefuroxime axetil 65271-80-9, Mitoxantrone 65277-42-1,  
 Ketoconazole 66376-36-1, Alendronate 66419-50-9, Bovine growth hormone  
 68099-86-5, Bepridil hydrochloride 68401-81-0, Ceftizoxime 68506-86-5,  
 Vigabatrin 69049-74-7, Nedocromil sodium 69655-05-6, Didanosine  
 69756-53-2, Halofantrine 70288-86-7, Ivermectin 70458-92-3, Pefloxacin  
 70458-96-7, Norfloxacin 71486-22-1, Vinorelbine 72432-03-2, Miglitol  
 72559-06-9, Rifabutine 73384-59-5, Ceftriaxone 73590-58-6, Omeprazole  
 73963-72-1, Cilostazol 74011-58-8, Enoxacin 74103-06-3, Ketorolac  
 74356-00-6, Cefotetan disodium 74381-53-6, Leuprolide acetate  
 75706-12-6, Leflunomide 76420-72-9, Enalaprilat 76470-66-1, Loracarbef  
 76547-98-3, Lisinopril 76824-35-6, Famotidine 76963-41-2, Nizatidine  
 78110-38-0, Aztreonam 79350-37-1, Cefixime 79517-01-4, Octreotide  
 acetate 79617-96-2, Sertraline 79794-75-5, Loratadine 79902-63-9,  
 Simvastatin 81093-37-0, Pravastatin 81098-60-4, Cisapride  
 81103-11-9, Clarithromycin 81161-17-3, Esmolol hydrochloride  
 82410-32-0, Ganciclovir 82419-36-1, Ofloxacin 82626-48-0, Zolpidem  
 82952-64-5, Trimetrexate glucuronate 83799-24-0, Fexofenadine  
 83869-56-1, Granulocyte-macrophage colony stimulating factor 83881-51-0,  
 Cetirizine 83905-01-5, Azithromycin 84057-84-1, Lamotrigine  
 84371-65-3, Mifepristone 84449-90-1, Raloxifene 84625-61-6,  
 Itraconazole 85721-33-1, Ciprofloxacin 86386-73-4, Fluconazole  
 86541-75-5, Benazepril 87679-37-6, Trandolapril 88669-04-9,  
 Trospoctomycin 89778-26-7, Toremifene 89987-06-4, Tiludronate  
 90357-06-5, Bicalutamide 91161-71-6, Terbinafine 93390-81-9,  
 Fosphenytoin 93413-69-5, Venlafaxine 93479-97-1, Glimepiride  
 93957-54-1, Fluvastatin 94749-08-3, Salmeterol xinafoate 95233-18-4,  
 Atovaquone 97240-79-4, Topiramate 97322-87-7, Troglitazone  
 97682-44-5, Irinotecan 98079-51-7, Lomefloxacin 98319-26-7,  
 Finasteride 100986-85-4, Levofloxacin 101828-21-1, Butenafine  
 103577-45-3, Lansoprazole 103628-46-2, Sumatriptan 104227-87-4,  
 Famciclovir 104987-11-3, Tacrolimus 105462-24-6, Risedronic acid  
 106133-20-4, Tamsulosin 106650-56-0, Sibutramine 106819-53-8,  
 Doxacurium chloride 106861-44-3, Mivacurium chloride 107648-80-6,  
 Cefepime hydrochloride 107753-78-6, Zafirlukast 110871-86-8,  
 Sparfloxacin 111025-46-8, Pioglitazone 111406-87-2, Zileuton  
 112965-21-6, Calcipotriene 113189-02-9, Antihemophilic factor  
 113665-84-2, Clodigrel 113852-37-2, Cidofovir 115103-54-3, Tiagabine  
 116094-23-6, Insulin aspart 117976-89-3, Rabeprazole 118072-93-8,  
 Zoledronate 118292-40-3, Tazarotene 119914-60-2, Grepafloxacin  
 120014-06-4, Donepezil 121368-58-9, Olpadronate 121679-13-8,  
 Naratriptan 122320-73-4, Rosiglitazone 123948-87-8, Topotecan  
 124832-26-4, Valaciclovir 127759-89-1, Lobucavir 127779-20-8,  
 Saquinavir 129497-78-5, Verteporfin 131918-61-1, Paricalcitol  
 133040-01-4, Eprosartan 133107-64-9, Insulin lispro 134523-00-5,  
 Atorvastatin 134678-17-4, Lamivudine 135062-02-1, Repaglinide  
 137862-53-4, Valsartan 138402-11-6, Irbesartan 139110-80-8, Zanamivir  
 139264-17-8, Zolmitriptan 139481-59-7, Candesartan 139639-23-9, Tissue  
 type plasminogen activator 143003-46-7, Alglucerase 143011-72-7,  
 Granulocyte colony stimulating factor 144034-80-0, Rizatriptan  
 144494-65-5, Tirofiban 144701-48-4, Telmisartan 145599-86-6,  
 Cerivastatin 145941-26-0, Oprelvekin 146961-76-4, Alatrofloxacin  
 147059-72-1, Trovafloxacin 148553-50-8, Pregabalin 151126-32-8,  
 Pramlintide 153559-49-0, Targretin 154361-50-9, Capecitabine  
 154598-52-4, Efavirenz 155213-67-5, Ritonavir 156259-68-6, Capmul MCM  
 157810-81-6, Indinavir sulfate 158747-02-5, Frovatriptan 158966-92-8,  
 Montelukast 159989-64-7, Nelfinavir 160337-95-1, Insulin glargine  
 162011-90-7, Rofecoxib 165101-51-9, Becaplermin 169148-63-4, Insulin  
 detemir 169590-42-5, Celecoxib 173146-27-5, Denileukin diftitox  
 191588-94-0, TNK-tPA 208666-87-9, Captex 810D  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (oil-in-water emulsion compns. for polyfunctional active ingredients)  
 IT 9003-98-9, Dornase 11096-26-7, Epoetin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( $\alpha$ ; oil-in-water emulsion compns. for polyfunctional active ingredients)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Bistran; US 4871768 A 1989 HCAPLUS
- (2) Demichele; US 5661180 A 1997 HCAPLUS
- (3) Demichele; US 6013665 A 2000 HCAPLUS
- (4) Demichele; US 6130244 A 2000 HCAPLUS
- (5) Demichele; US 6160007 A 2000 HCAPLUS
- (6) Jandacek; US 4753963 A 1988 HCAPLUS

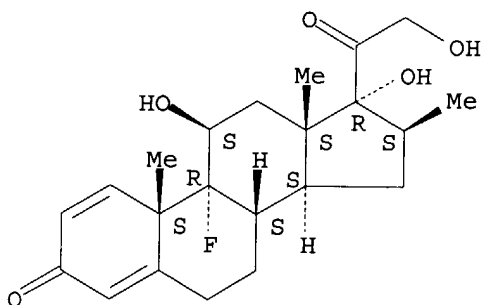
IT 378-44-9, Betamethasone 616-91-1, Acetylcysteine  
1405-87-4, Bacitracin 1406-16-2, Vitamin  
D 1406-18-4, Vitamin E  
1695-77-8, Spectinomycin 11103-57-4, Vitamin  
A 34787-01-4, Ticarcillin

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(oil-in-water emulsion compns. for polyfunctional active ingredients)

RN 378-44-9 HCAPLUS

CN Pregna-1,4-diene-3,20-dione, 9-fluoro-11,17,21-trihydroxy-16-methyl-,  
(11 $\beta$ ,16 $\beta$ )- (9CI) (CA INDEX NAME)

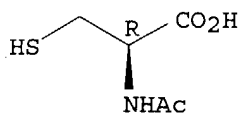
Absolute stereochemistry.



RN 616-91-1 HCAPLUS

CN L-Cysteine, N-acetyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1405-87-4 HCAPLUS

CN Bacitracin (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 1406-16-2 HCAPLUS

CN Vitamin D (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 1406-18-4 HCAPLUS

CN Vitamin E (9CI) (CA INDEX NAME)

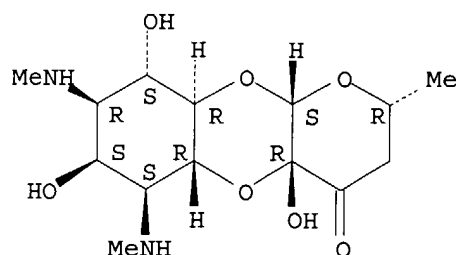
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 1695-77-8 HCAPLUS

CN 4H-Pyrano[2,3-b][1,4]benzodioxin-4-one, decahydro-4a,7,9-trihydroxy-2-methyl-6,8-bis(methylamino)-, (2R,4aR,5aR,6S,7S,8R,9S,9aR,10aS)- (9CI)

(CA INDEX NAME)

Absolute stereochemistry.



RN 11103-57-4 HCAPLUS

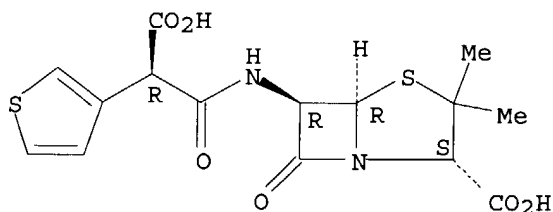
CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 34787-01-4 HCAPLUS

CN 4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[[[(2R)-carboxy-3-thienylacetyl]amino]-3,3-dimethyl-7-oxo-, (2S,5R,6R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L114 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:247174 HCAPLUS

DN 134:271267

ED Entered STN: 06 Apr 2001

TI A pharmaceutical composition for stabilising atherosclerotic plaques

IN Kenton, Kalevi John; Carey, Adam Henry; Carey, Beverly Jane; Haynes, Antony John

PA Avansis Limited, UK

SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-00

CC 63-6 (Pharmaceuticals)

Section cross-reference(s): 1, 17

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001022958	A2	20010405	WO 2000-GB3665	20000925 <--
	WO 2001022958	A3	20011115		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,  
 CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1225893 A2 20020731 EP 2000-962718 20000925 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL  
 US 2002172729 A1 20021121 US 2002-118964 20020410 <--  
 PRAI GB 1999-22751 A 19990927 <--  
 WO 2000-GB3665 W 20000925 <--  
 US 2000-669597 A3 20000926 <--

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001022958	ICM	A61K031-00
US 2002172729	ECLA	A61K031/07; A61K031/195; A61K031/352; A61K031/355; A61K031/375

AB The invention relates to a pharmaceutical composition that can be used to treat or prevent disorders of the vascular system. The composition comprises lycopene in combination with a flavonoid, an amino acid, magnesium, ascorbate and **vitamin E**. Thus, a sachet formulation contained Mg ascorbate 3 and lysine 3 g, **vitamin E** (emulsified) 300, lycopene 5, and **bioflavonoids** 600 mg.

ST atherosclerotic plaque pharmaceutical ascorbate flavonoid; amino acid **vitamin E** atherosclerotic plaque pharmaceutical

IT Aneurysm  
 (arterial; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT **Flavonoids**  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (**biflavonoids**; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Heart, disease  
 (failure; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Heart, disease  
 (infarction; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Brain, disease  
 (insufficiency; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Flavones  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (isoflavones; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Anti-**inflammatory** agents  
 (nonsteroidal; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Antianginal agents  
 Antihypertensives  
 Atherosclerosis  
 Garlic (*Allium sativum*)  
 Hypolipemic agents  
 Platelet (blood)  
 (pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Amino acids, biological studies  
**Carotenes, biological studies**  
 Flavones  
**Flavonoids**  
**Tocopherols**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmaceutical composition for stabilizing atherosclerotic plaques)

IT **Eye, disease**

(**retina, thrombosis**; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Drug delivery systems

(sachets; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Brain, disease

(stroke; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT Embolism

(thromboembolism; pharmaceutical composition for stabilizing atherosclerotic plaques)

IT 50-81-7, **Ascorbic acid**, biological studies

50-81-7D, **Ascorbic acid**, esters or salts

56-87-1, Lysine, biological studies 56-87-1D, L-Lysine, esters or salts, biological studies 59-02-9, d- $\alpha$ - **Tocopherol** 59-02-9D,

$\alpha$ - **Tocopherol**, derivs. 63-68-3, Methionine, biological

studies 74-79-3, Arginine, biological studies 127-40-2, Lutein

144-68-3, **Zeaxanthin** 147-85-3, Proline, biological

studies 153-18-4, Rutin 303-98-0, Coenzyme Q10 502-65-8, Lycopene

520-26-3, Hesperidine 1200-22-2, Lipoic acid 1406-18-4

, **Vitamin E** 2074-53-5, dl- $\alpha$ - **Tocopherol**

15431-40-0, Magnesium ascorbate 27753-59-9, Flavonal 35212-22-7,

Ipriflavone

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmaceutical composition for stabilizing atherosclerotic plaques)

IT 50-81-7, **Ascorbic acid**, biological studies

50-81-7D, **Ascorbic acid**, esters or salts

144-68-3, **Zeaxanthin** 1200-22-2, Lipoic acid

1406-18-4, **Vitamin E**

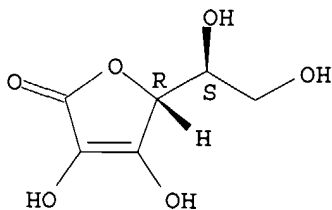
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(pharmaceutical composition for stabilizing atherosclerotic plaques)

RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

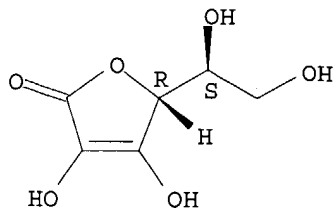


RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



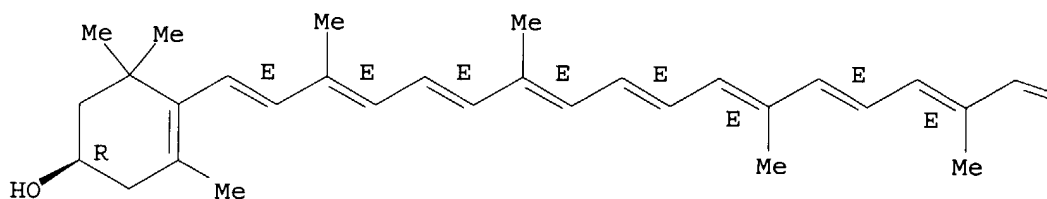


RN 144-68-3 HCAPLUS

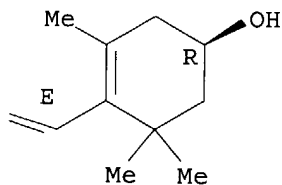
CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



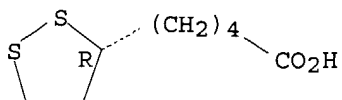
PAGE 1-B



RN 1200-22-2 HCAPLUS

CN 1,2-Dithiolane-3-pentanoic acid, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 1406-18-4 HCAPLUS

CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:208119 HCAPLUS

DN 134:236643

ED Entered STN: 22 Mar 2001

TI Stable carotene-xanthophyll beadlet compositions and methods of use

IN Lang, John C.

PA Alcon Universal Ltd., Switz.

SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM A61K035-78  
 ICS A23L001-30; A23L001-303  
 CC 17-6 (Food and Feed Chemistry)  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001019383	A1	20010322	WO 2000-US24439	20000906 <--
	W: AU, BR, CA, JP, MX, TR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6582721	B1	20030624	US 1999-397472	19990917 <--
	EP 1212071	A1	20020612	EP 2000-959942	20000906 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2003516720	T2	20030520	JP 2001-523015	20000906 <--
	BR 2000014087	A	20030729	BR 2000-14087	20000906 <--
	US 6716447	B1	20040406	US 2002-88188	20020314 <--
PRAI	US 1999-397472	A	19990917	<--	
	WO 2000-US24439	W	20000906	<--	

## CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	WO 2001019383	ICM	A61K035-78
		ICS	A23L001-30; A23L001-303
	US 6582721	ECLA	A23L001/30B; A23L001/302; A23L001/304; A61K031/52; A61K035/78
	US 6716447	ECLA	A23L001/30B; A23L001/302; A23L001/304; A61K031/52; A61K035/78
AB	Beadlets comprising xanthophylls and carotenes and/or retinoids, dietary supplements comprising these beadlets and methods of use are disclosed.		
ST	carotene xanthophyll beadlet food additive; nutrient carotene xanthophyll eye disease		
IT	<b>Eye, disease</b> (age-related macular degeneration; stable carotene-xanthophyll beadlet compns. and methods of use)		
IT	Fats and Glyceridic oils, biological studies RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (antioxidant; stable carotene-xanthophyll beadlet compns. and methods of use)		
IT	<b>Flavonoids</b> RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (bioflavonoids; stable carotene-xanthophyll beadlet compns. and methods of use)		
IT	Drug delivery systems (capsules; stable carotene-xanthophyll beadlet compns. and methods of use)		
IT	Gelatins, biological studies RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (hydrolyzates; stable carotene-xanthophyll beadlet compns. and methods of use)		
IT	<b>Eye, disease</b> (laser therapy damage; stable carotene-xanthophyll beadlet compns. and methods of use)		
IT	Liquids (oils, antioxidant; stable carotene-xanthophyll beadlet compns. and methods of use)		
IT	Resins		

- RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(oleoresins; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT Nerve  
(optic, neuropathy; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT **Carotenes, biological studies**  
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(oxy; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT **Eye, disease**  
(postsurgical complications; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT **Eye, disease**  
(retina, ischemia; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT **Eye, disease**  
(retinopathy, iatrogenic; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT **Eye, disease**  
(retinopathy; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT Essential oils  
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(rosemary; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT **Antioxidants**  
**Eye, disease**  
Food additives  
**Glaucoma (disease)**  
(stable carotene-xanthophyll beadlet compns. and methods of use)
- IT Carnauba wax  
**Carotenes, biological studies**  
Polyoxyalkylenes, biological studies  
Retinoids  
**Tocopherols**  
Trace element nutrients  
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(stable carotene-xanthophyll beadlet compns. and methods of use)
- IT 9004-34-6, Cellulose, biological studies  
RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(microcryst.; stable carotene-xanthophyll beadlet compns. and methods of use)
- IT 50-81-7, Vitamin C, biological studies  
59-02-9,  $\alpha$ -Tocopherol 119-13-1,  $\delta$ -Tocopherol 148-03-8,  $\beta$ -Tocopherol 490-23-3,  $\epsilon$ -Tocopherol 6829-55-6, Tocotrienol 7616-22-0,  $\gamma$ -Tocopherol 11103-57-4, Provitamin A 11103-57-4D, Provitamin A, analogs  
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)  
(stable carotene-xanthophyll beadlet compns. and methods of use)
- IT 57-50-1, Sucrose, biological studies 59-30-3, Folic acid, biological studies 59-67-6, Niacin, biological studies 65-23-6, Pyridoxine 68-19-9, Cyanocobalamin 79-83-4, Pantothenic acid 83-88-5, Vitamin B2, biological studies 110-44-1, Sorbic acid 117-39-5, Quercetin 127-40-2, Lutein 137-66-6, Ascorbyl palmitate 144-68-3, Zeaxanthin 153-18-4, Rutin 472-61-7, Astaxanthin 472-70-8, Cryptoxanthin 472-89-9,

ε-Carotene 472-92-4, δ-Carotene 472-93-5,  
 γ-Carotene 478-01-3, Nobiletin 480-18-2 480-40-0, Chrysin  
 480-44-4, Acacetin 481-53-8, Tangeretin 502-65-8, ψ,ψ-Carotene  
**514-78-3**, Canthaxanthin 520-18-3, Kaempferol 520-36-5,  
 Apigenin 532-32-1, Sodium benzoate 551-15-5, Liquiritin 557-04-0,  
 Magnesium stearate 557-34-6, Zinc acetate **1406-18-4**,  
**Vitamin E** 3211-76-5, L-Selenomethionine 4345-03-3,  
 α- **Tocopherol** succinate 7235-40-7, β-Carotene  
 7439-96-5, Manganese, biological studies 7440-47-3, Chromium, biological  
 studies 7440-50-8, Copper, biological studies 7440-50-8D, Copper,  
 amino acid chelates, biological studies 7488-99-5, α-Carotene  
 7631-86-9, Silica, biological studies 7757-93-9, Dicalcium phosphate  
 7782-49-2, Selenium, biological studies 9004-65-3,  
 Hydroxypropylmethylcellulose 9005-25-8, Starch, biological studies  
 9005-65-6, Polysorbate 80 13463-67-7, Titanium dioxide, biological  
 studies 25322-68-3, Polyethylene glycol 74811-65-7, Croscarmellose  
 sodium  
 RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological  
 study); USES (Uses)

(stable carotene-xanthophyll beadlet compns. and methods of use)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Giampapa, V; US 5895652 A 1999 HCAPLUS
- (2) Howard Foundation; WO 9811789 A 1998 HCAPLUS
- (3) Ibrahim, N; US 5955102 A 1999 HCAPLUS
- (4) Kosbab, J; WO 9833494 A 1998 HCAPLUS

IT **50-81-7, Vitamin C**, biological studies  
**11103-57-4**, Provitamin A **11103-57-4D**, Provitamin A,  
 analogs

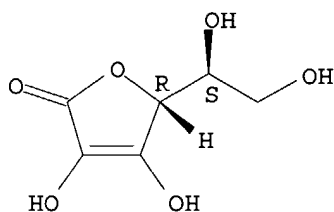
RL: FFD (Food or feed use); PEP (Physical, engineering or chemical  
 process); BIOL (Biological study); PROC (Process); USES (Uses)

(stable carotene-xanthophyll beadlet compns. and methods of use)

RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 11103-57-4 HCAPLUS

CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11103-57-4 HCAPLUS

CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

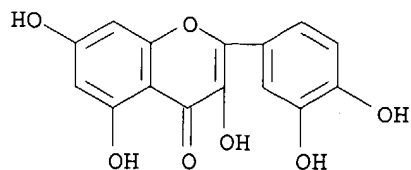
IT **117-39-5, Quercetin** **144-68-3**,  
**Zeaxanthin** **472-61-7**, **Astaxanthin**  
**514-78-3**, Canthaxanthin **1406-18-4**, **Vitamin**  
**E**

RL: FFD (Food or feed use); THU (Therapeutic use); BIOL (Biological  
 study); USES (Uses)

(stable carotene-xanthophyll beadlet compns. and methods of use)

RN 117-39-5 HCAPLUS

CN 4H-1-Benzopyran-4-one, 2-(3,4-dihydroxyphenyl)-3,5,7-trihydroxy- (9CI)  
(CA INDEX NAME)

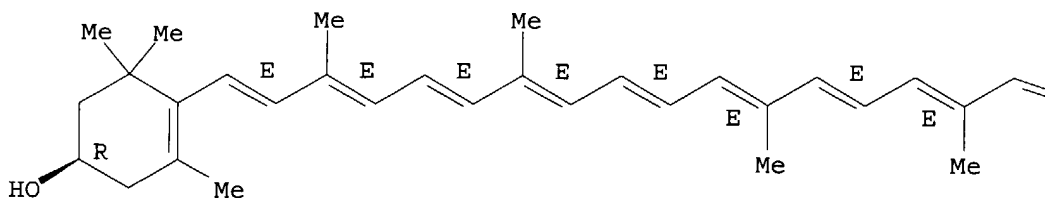


RN 144-68-3 HCAPLUS

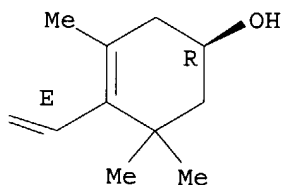
CN  $\beta,\beta$ -Carotene-3,3'-diol, (3R,3'R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B

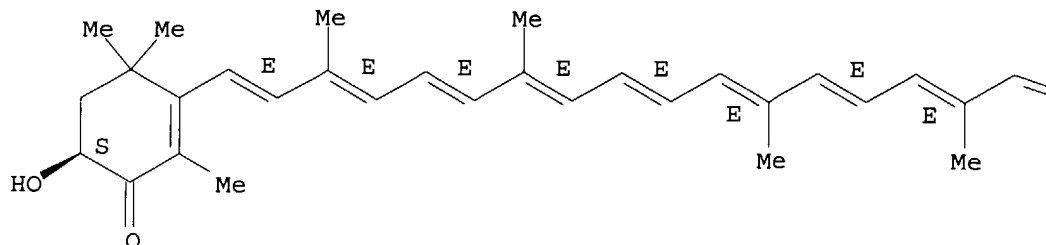


RN 472-61-7 HCAPLUS

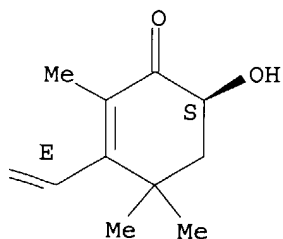
CN  $\beta,\beta$ -Carotene-4,4'-dione, 3,3'-dihydroxy-, (3S,3'S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
Double bond geometry as shown.

PAGE 1-A



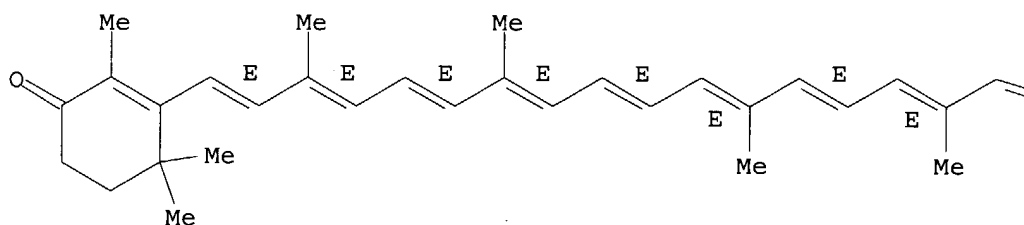
PAGE 1-B



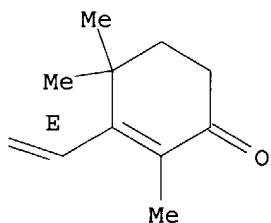
RN 514-78-3 HCAPLUS  
 CN  $\beta,\beta$ -Carotene-4,4'-dione (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



RN 1406-18-4 HCAPLUS  
 CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1999:464015 HCAPLUS  
 DN 131:106819  
 ED Entered STN: 29 Jul 1999  
 TI Vitamin and mineral-containing compositions for the treatment of dry  
 eye  
 IN Lalvani, Kartar; Seoane Sanchez, Jose Francisco; Taylor, Robert P.  
 PA UK  
 SO Eur. Pat. Appl., 5 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM A61K033-00  
 ICS A61K033-04; A61K033-24; A61K033-26; A61K033-30; A61K033-32  
 ICI A61K033-00, A61K031-00  
 CC 63-6 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 930072	A1	19990721	EP 1998-300193	19980113 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI	EP 1998-300193		19980113	<--	

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	EP 930072	ICM	A61K033-00
		ICS	A61K033-04; A61K033-24; A61K033-26; A61K033-30; A61K033-32
		ICI	A61K033-00, A61K031-00
AB	This invention relates to the use of novel combinations of vitamins and minerals to give a product which affects an improvement in conjunctival goblet cell population d., improving the mucus layer of the tear film to mediate the uniform spread of the aqueous phase, and acts to promote an absolute increase in pre-ocular tear film stability in dry eye conditions. The invention involves the systemic use of unique mixts. of specific metallic cations, non-metallic elements and vitamins and provides greater convenience than existing treatments which require the frequent application of topical solns. or lubricant ointments. The action by the invention to improve tear stability is of particular importance to the treatment of dry eye conditions experienced by contact lens users. A composition for the systemic delivery contained vitamin A 300 µg, β-carotene 3, vitamin E 60, vitamin C 150 mg, vitamin D 2.5 µg, vitamin B6 4.5, vitamin B1 4.5, vitamin B2 7.5, vitamin B12 4.5, folic acid 250, vitamin K1 100 µg, Ca pantothenate 10, Zn 7.5, Fe 3, Cu 1, Mg 50, Mn 2 mg, Se 100, Cr 50, and I 100 µg.		
ST	systemic delivery vitamin mineral dry eye		
IT	<b>Flavonoids</b> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (bioflavonoids; systemic delivery compns. containing vitamins and minerals for treatment of dry eye)		
IT	<b>Eye, disease</b> (dry; systemic delivery compns. containing vitamins and minerals for treatment of dry eye)		
IT	<b>Contact lenses</b> Drug delivery systems (systemic delivery compns. containing vitamins and minerals for treatment of dry eye)		
IT	<b>Carotenes, biological studies</b> Minerals, biological studies Vitamins RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (systemic delivery compns. containing vitamins and minerals for treatment of dry eye)		
IT	<b>50-81-7, L-Ascorbic acid, biological studies</b> 59-30-3, Folic acid, biological studies 68-19-9, Cyanocobalamin 83-88-5, Riboflavin, biological studies 137-08-6, Calcium pantothenate 532-43-4, Thiamine mononitrate 1406-16-2, Vitamin D 1406-18-4, Vitamin E 7235-40-7, β-Carotene 7439-89-6, Iron, biological studies 7439-95-4, Magnesium, biological studies 7439-96-5, Manganese, biological studies 7440-47-3, Chromium, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies 7553-56-2, Iodine,		

biological studies 7782-49-2, Selenium, biological studies 8059-24-3,  
Vitamin B6 11103-57-4, **Vitamin A**  
11104-38-4, Vitamin K1

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(systemic delivery compns. containing vitamins and minerals for treatment of dry eye)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Patel, S; ACTA OPHTHALMOL 1993, V71(6), P825 MEDLINE

(2) Patel, S; ADV EXP MED BIOL 1994, V350, P285 HCAPLUS

IT 50-81-7, L-Ascorbic acid, biological studies

1406-16-2, Vitamin D 1406-18-4,

Vitamin E 11103-57-4, Vitamin

**A**

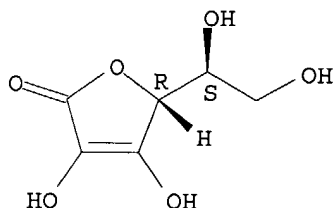
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(systemic delivery compns. containing vitamins and minerals for treatment of dry eye)

RN 50-81-7 HCAPLUS

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1406-16-2 HCAPLUS

CN Vitamin D (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 1406-18-4 HCAPLUS

CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11103-57-4 HCAPLUS

CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:542962 HCAPLUS

DN 129:166230

ED Entered STN: 26 Aug 1998

TI Compositions and methods for prevention and treatment of vascular degenerative diseases

IN Kosbab, John V.

PA USA

SO PCT Int. Appl., 62 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM A61K031-07

ICS A61K031-70; A61K031-255; A61K031-355; A61K031-375; A61K033-06;



A61K033-30; A61K033-24; A61K033-32; A61K035-78; C07C039-12;  
C07C057-00; C07D311-00; C07D345-00

CC 63-6 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9833494	A1	19980806	WO 1998-US2005	19980204 <--
	W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
	CA 2280093	AA	19980806	CA 1998-2280093	19980204 <--
	AU 9861414	A1	19980825	AU 1998-61414	19980204 <--
	EP 1021177	A1	20000726	EP 1998-906094	19980204 <--
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
	JP 2001511153	T2	20010807	JP 1998-533193	19980204 <--
	US 2001031744	A1	20011018	US 2001-827251	20010405 <--
	US 2003108624	A1	20030612	US 2002-187318	20020628 <--
PRAI	US 1997-37084P	P	19970204	<--	
	US 1997-43262P	P	19970417	<--	
	US 1998-18273	B1	19980204	<--	
	WO 1998-US2005	W	19980204	<--	
	US 2001-827251	B1	20010405	<--	

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9833494	ICM	A61K031-07
	ICS	A61K031-70; A61K031-255; A61K031-355; A61K031-375; A61K033-06; A61K033-30; A61K033-24; A61K033-32; A61K035-78; C07C039-12; C07C057-00; C07D311-00; C07D345-00
US 2003108624	ECLA	A61K035/78; A61K045/06

AB This invention relates to nutrient and therapeutic compns. for treatment and prevention of symptoms and disease conditions associated with microangiopathy and macroangiopathy and to methods using the compns. In particular, the invention relates to compns. useful in the treatment of diabetic retinopathy and nephropathy, to compns. useful in the treatment of other **retinal** disorders including macular degeneration and **cataracts**, to compns. useful in wound healing, to compns. useful for treatment and prevention of neuropathy, to compns. useful for treatment and prevention of cardiovascular disease and to compns. useful for the treatment and prevention of dental and periodontal disorders. An exemplary diabetic composition contains **bilberry** extract, Ca (Krebs), chondroitin sulfate, Cr picolinate, Co Q10, Fenugreek seed powder, Flax seed powder, folic acid, linoleic acid, Ginkgo biloba, Gymnema sylvestre, **taurine** (or homotaurine), **grape seed** extract, acetyl L-carnitine, lutein, Mg (Krebs), **N-acetyl-L-cysteine**, pine bark extract, phytosterol complex, K citrate, protamine sulfate, shark cartilage, soy isolate, **green tea** polyphenols, **vitamin A**, vitamin B2, vitamin B6, vitamin B12, **vitamin C**, **vitamin E**, and Zn (Krebs).

ST **bioflavonoid** neovascular regulator vascular degeneration treatment; diabetic microangiopathy plant **bioflavonoid** chondroitin sulfate

IT Aloe barbadensis  
Angiogenesis inhibitors  
**Antioxidants**

- Ginger
- Ginkgo biloba
- Gymnema sylvestre
- Licorice (Glycyrrhiza)
  - (**bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT **Carotenes, biological studies**
  - RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
  - (**bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT **Flavonoids**
  - RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
  - (**bioflavonoids; bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Tooth
  - (caries, treatment of; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Blood vessel, disease
  - (diabetic microangiopathy, treatment of; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Kidney, disease
  - (diabetic nephropathy, treatment of; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Cardiovascular system
- Gingiva
- Periodontium
  - (disease, treatment of; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Bark
  - Bilberry**
    - (**exts.**; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT **Tea products**
  - (**green; bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Blood vessel, disease
  - (injury, macroangiopathy; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT **Eye, disease**
  - (macula, degeneration, treatment of; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Blood vessel, disease
  - (microangiopathy; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Nerve, disease
  - (neuropathy, treatment of; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Drug delivery systems
  - (oral; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT **Eye, disease**
  - (**retinopathy**, treatment of; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT **Grape**
  - (**seed, exts.**; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)
- IT Fenugreek (Trigonella foenum-graecum)
  - (seed; **bioflavonoids** and neovascular regulators for treatment of vascular degenerative diseases)

IT Collagens, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(synthesis promotion in; **bioflavonoids** and neovascular  
regulators for treatment of vascular degenerative diseases)

IT **Cataract**  
(treatment of; **bioflavonoids** and neovascular regulators for  
treatment of vascular degenerative diseases)

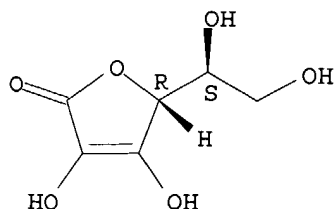
IT **50-81-7, Vitamin C**, biological studies  
67-97-0D, Vitamin D3, derivs. 539-86-6, Allicin **1406-18-4**,  
**Vitamin E** 7439-95-4D, Magnesium, compds., biological  
studies 7440-47-3D, Chromium, compds., biological studies 7440-66-6D,  
Zinc, compds., biological studies 7440-70-2D, Calcium, compds.,  
biological studies 9007-28-7, Chondroitin sulfate **11103-57-4**,  
**Vitamin A** 27882-76-4 29031-19-4  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(**bioflavonoids** and neovascular regulators for treatment of  
vascular degenerative diseases)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
(1) Bridge Research Foundation; CA 1277909 A 1990 HCAPLUS  
(2) Nutramax Laboratories Inc; WO 9422453 A 1994 HCAPLUS  
(3) Paul; US 5292538 A 1994 HCAPLUS  
(4) Rowland; US 5405613 A 1995 HCAPLUS  
(5) Seikagaku Kogyo Kabushiki Kaisha Seikagaku Corporation; EP 0609042 A1 1994  
HCAPLUS  
(6) The Howard Foundation; WO 9500130 A1 1995 HCAPLUS

IT **50-81-7, Vitamin C**, biological studies  
**1406-18-4, Vitamin E** **11103-57-4**,  
**Vitamin A**  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES  
(Uses)  
(**bioflavonoids** and neovascular regulators for treatment of  
vascular degenerative diseases)

RN 50-81-7 HCAPLUS  
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1406-18-4 HCAPLUS  
CN Vitamin E (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 11103-57-4 HCAPLUS  
CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

L114 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2004 ACS on STN  
AN 1996:472467 HCAPLUS  
DN 125:166395

ED Entered STN: 09 Aug 1996

TI Changes in plasma carotenoid, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable extracts: A pilot study

AU **Wise, John A.**; Morin, Robert J.; Sanderson, Roger; Blum, Kenneth

CS Natural Alternatives International Research Foundation, San Marcos, Can.

SO Current Therapeutic Research (1996), 57(6), 445-461

CODEN: CTCEA9; ISSN: 0011-393X

PB Excerpta Medica

DT Journal

LA English

CC 18-2 (Animal Nutrition)

AB Studies over the last two decades equating diet with chronic diseases have linked the highest consumption of mixed fruits and vegetables to a reduced risk of coronary heart disease (CHD), stroke, **cataracts**, and cancer at multiple sites. High levels of natural antioxidants, including the carotenoids, tocopherols, and ascorbic acid, appear to be responsible for these redns. in risk. However, long-term intervention studies to alter chronic disease outcomes have generally used a single nutrient such as beta-carotene at high doses, and results have been disappointing. Because antioxidants have multiple and synergistic interactions and also exhibit compartmentalization and tissue specificity, it appears desirable to use supplementation that increases blood levels while simulating combinations of these chemoprotective substances in amts. more closely approximating amts. of mixed diets. This study measured carotenoid and tocopherol levels in human plasma after supplementation with dehydrated fruit and vegetable exts. (JuicePlus+). Serum lipid peroxides were also measured to assess the effectiveness of supplementation in modifying oxidative processes. Fifteen healthy adults (10 women, 5 men; age range, 18 to 53 yr) consumed supplements twice daily with meals for 28 days, with fasting plasma and serum samples taken at baseline and 7, 14, and 28 days. After 28 days, plasma antioxidant levels increased significantly: beta-carotene, 510%; alpha-carotene, 119%; lutein/**zeaxanthin**, 44%; lycopene, 2046%; and alpha-tocopherol, 58%. Serum lipid peroxides decreased 4-fold after 7 days and remained significantly lower than baseline at 28 days (baseline, 16.85 ± 16.91 µmol/mL; 28 days, 4.22 ± 3.78 µmol/mL). Decreases in lipid peroxide levels were coincident with increases in carotenoids and alpha-tocopherol, and reflect functionally improved oxidative defense mechanisms. Because these bioactive compds. can act synergistically, the effect cannot be attributed to any one component, but it may reflect a combined mechanism of antioxidant defense. Marked increases in plasma levels of predominant dietary carotenoids and α-tocopherol in all subjects indicate that supplementation with fruit and vegetable concs. may prove effective in future intervention studies.

ST plasma carotenoid tocopherol fruit vegetable ext

IT Antioxidants  
(changes in plasma carotenoid, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable exts. - A pilot study)

IT **Carotenes and Carotenoids, biological studies**  
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)  
(changes in plasma carotenoid, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable exts. - A pilot study)

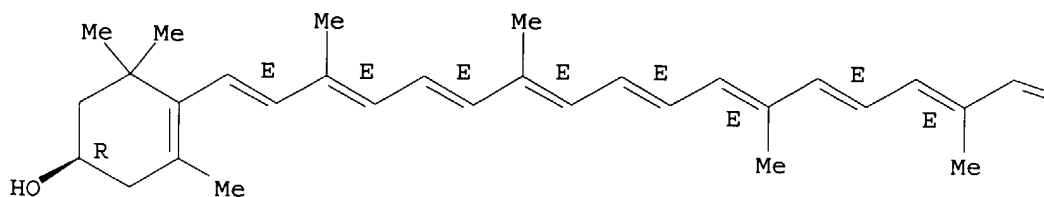
IT Fruit  
(exts.; changes in plasma carotenoid, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable exts. - A pilot study)

IT Vegetable  
(exts; changes in plasma carotenoid, alpha-tocopherol, and lipid

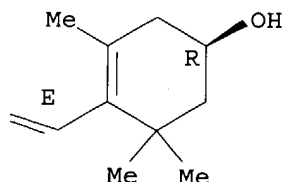
- peroxide levels in response to supplementation with concentrated fruit and vegetable exts. - A pilot study)
- IT Lipids, biological studies  
 RL: BPR (Biological process); BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative); PROC (Process)  
 (peroxides, changes in plasma carotenoid, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable exts. - A pilot study)
- IT 59-02-9,  $\alpha$ -Tocopherol  
 RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)  
 (changes in plasma carotenoid, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable exts. - A pilot study)
- IT 127-40-2, Lutein **144-68-3, Zeaxanthin** 502-65-8,  
 Lycopene 7235-40-7,  $\beta$ -Carotene 7488-99-5,  $\alpha$ -Carotene  
 RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)  
 (changes in plasma carotenoid, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable exts. - A pilot study)
- IT **144-68-3, Zeaxanthin**  
 RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)  
 (changes in plasma carotenoid, alpha-tocopherol, and lipid peroxide levels in response to supplementation with concentrated fruit and vegetable exts. - A pilot study)
- RN 144-68-3 HCAPLUS  
 CN  $\beta, \beta$ -Carotene-3,3'-diol, (3R,3'R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.  
 Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



OREF 41:7595f-i,7596f-i,7597a-b  
ED Entered STN: 22 Apr 2001  
TI Fifty-ninth annual report of the College of Agriculture at Cornell University and of the Cornell University Agricultural Experiment Station, 1946  
AU Day, Edmund Ezra; Myers, William I.; Gibson, Anson Wright; Simons, Lloyd R.; Guterman, C. E. F.  
CS Ithaca  
SO New York (Cornell) Agr. Expt. Sta. Ann. Rept. (1946), 59, 5-183  
DT Journal  
LA Unavailable  
CC 15 (Soils and Fertilizers)  
AB The results of the following exptl. studies are briefly reported: exposure tests of farm fencing, relationship between some of the physicochem. properties of New York soils and their response to fertilization, the structure of soils, K<sub>2</sub>O requirements of perennial leguminous forage crops grown on representative New York soils, preservation of semen for artificial insemination, carotene and **vitamin A** requirements of dairy calves, effect of curing methods upon the feeding value of hay, nutritive value of forages for dairy animals, nutritional requirements of herbivora as studied by purified-diet methods, effect of vitamin supplements upon mortality rate and growth of suckling lambs, value of thiouracil in rations for growing and fattening pigs, curing and summer storage of hams without refrigeration, effect of processing and storage upon the vitamin content of alfalfa meal, study of methods of determining total **ascorbic acid** in cooked foods, enzyme studies, effects of state of development, methods of curing, and time of day at which forage crops are cut on the yield, composition, and nutritive value of the materials, influence of x-rays on the growth and metabolic processes in ferns, delayed photosynthesis in chlorophyll-bearing embryos of orchids, plants as sources of the basic ingredients of chickadee used in chewing gum, comparative nutrition and metabolism investigations with the lactic acid bacteria, control of lettuce yellows through control of the aster leafhopper, influence of climatic factors on the active ingredients and diluents used in insecticidal dusts, alfalfa-snout-beetle investigation, control of the European chafer, of the seed-corn maggot, of external parasites of livestock, and insects that attack potatoes, fumigants for red spider mite control in green-houses, selenates for pest control on greenhouse crops, the efficiency of fall and spring dinitro (dinitro-o-cresol and Na dinitro-o-cresolate) treatments for control of rosy aphid and bud moth; biochem. and biophys. evaluation of the action of insecticides, activators, and synergists in insect control, effects of com. fruit-tree sprays upon honeybees and natural pollinators, control of crab grass through elimination of seed germination by 2,4-dichlorophenoxyacetic acid, relative effectiveness of selective weed killers on turf, B deficiency and other nutritional diseases of apple, control of apple scab, Dutch elm disease, golden nematode disease of potatoes, soil fumigants, biochem. investigation of the effect of fungicides on vegetable seeds in storage, virus yellows and ringspot diseases of sour **cherries**, influence of different percentages of soil O and CO<sub>2</sub> on root activity and top growth (of apples), influence of soil type on the supply of K and other nutrients to fruit plants, storage of apples, basal metabolism rate of various apple varieties, efficiency of oiled wraps, shredded oiled paper, and different waxes in the control of apple scald and shriveling, effect of low, nonfreezing temps. on the keeping quality of apples, abscission of premature fruits and control of drop by use of growth-modifying chemicals, influence of blossom sprays on the annual bearing of apples, thinning peaches with a spray at bloom time, function of Mn and choline in poultry bone formation, role of an unidentified factor found in animal protein supplements in the rations of chicks and hens, requirements of poultry for the components of the **vitamin B** complex, effect of restricted feeding, light, and summer molt upon fertility, hatchability, and egg production the

- following fall, poultry pastures, green manures and cover crops in vegetable production, fertilizer requirements of vegetable crops, rapid methods of plant tissue analysis, and factors affecting chemical composition and
- culinary quality of potato tubers.
  - IT Elms and(or) Ulmus  
(Dutch disease of)
  - IT Apples
  - Enzymes
  - Fumigants
  - Nutrition, animal
  - Potatoes
  - Soils
  - Sprays  
(New York Experiment Sta. report on)
  - IT Insecticides
  - Metabolism, plant  
(New York Experiment Sta. reports on)
  - IT Feeding experiments  
(New York Experiment Station reports on)
  - IT Plant tissue  
(analysis of)
  - IT Growth substances  
(animal-protein factor, chick and hen responses to)
  - IT Photosynthesis  
(by orchid embryos)
  - IT Chewing gum  
(chicle for, plants producing)
  - IT Plants  
(composition, nutritive value and yield of forage crops, effects of state of development, methods of curing and time of day on)
  - IT Amphimallon majalis and(or) European chafer
  - Anuraphis roseus and(or) Rosy apple aphid
  - Apple scab
  - Brachyrhinus ligustici and(or) Alfalfa snout beetle
  - Heterodera rostochiensis
  - Hylemya cilicrura and(or) Seed-corn maggot
  - Spilonota ocellana and(or) **Eye**-spotted budmoth  
(control of)
  - IT Red spider mite  
(control of, in greenhouses)
  - IT Macrosteles fascifrons and(or) Six-spotted leafhopper  
(control on lettuce)
  - IT Parasites  
(control on livestock)
  - IT Grasses  
(crab, 2,4-D in control of)
  - IT Meat  
(curing and summer storage of ham without refrigeration)
  - IT Roots  
(effect of CO<sub>2</sub> and O on apple tree)
  - IT Bones  
(effect of choline and Mn on poultry)
  - IT X-rays  
(effect on ferns)
  - IT Fungicides or Fungistats  
(effect on vegetable seed)
  - IT Fertilizers  
(expts., in New York)
  - IT Bees  
(fruit-tree spray effect on)
  - IT Seeds  
(fungicide effect on)

IT Ferns  
(growth and metabolism of, x-ray effect on)

IT Vitamins  
(in alfalfa meal and effect of vitamin supplements on mortality rate  
and growth of suckling lambs)

IT **Carotene**  
(in calf nutrition)

IT Waxes or Waxy substances  
(in control of apple scald and shriveling)

IT Plant regulators  
(in fruit-drop control)

IT Selenates  
(in pest control on greenhouse crops)

IT Weed control  
(in turt)

IT Bacteria  
(lactic acid, metabolism and nutrition of)

IT Alfalfa (*Medicago sativa*)  
(meal, vitamin content of)

IT Fruit  
(nutrient supplied to, soil type and)

IT Hay  
(nutritive value of, curing methods and)

IT Nutrition, plant  
(of apples)

IT Paper  
(oil-, for wrapping apples)

IT Wrapping materials  
(oiled for apples)

IT Orchids  
(photosynthesis (delayed) in chlorophyllbearing embryos of)

IT Chicle  
(plants producing)

IT Legumes and(or) Leguminosae  
(potassium requirements of perennial)

IT Semen  
(preservation of)

IT **Cherries**  
(ring spot and virus yellows of)

IT Pesticides  
(selenates as, for greenhouse crops)

IT Peaches  
(thinning of, with sprays)

IT Food  
(**vitamin C** in cooked)

IT Turf  
(weed control in)

IT Lettuce  
(yellows of, control of)

IT **11103-57-4, Vitamin, A**  
(calf requirements for)

IT 7440-42-8, Boron  
(deficiency of, in apples)

IT **50-81-7, Vitamin, C**  
(determination or assay of, in cooked foods)

IT 534-52-1, o-Cresol, 4,6-dinitro-  
(in control of bud moth and rosy aphid, and its Na derivative)

IT 141-90-2, Uracil, 2-thio-  
(in pig rations)

IT 62-49-7, Choline 7439-96-5, Manganese  
(in poultry-bone formation)

IT 7782-44-7, Oxygen  
(in soil, effect on root activity and top growth of apples)

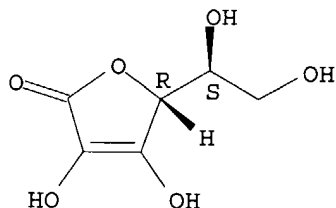


IT 124-38-9, Carbon dioxide  
 (in soils, effect on root activity and top growth of apples)  
 IT 7440-09-7, Potassium  
 (in soils, of New York, requirements and supply of)  
 IT 94-75-7, Acetic acid, (2,4-dichlorophenoxy)-  
 (in weed control)  
 IT 12001-76-2, **Vitamin B**  
 (poultry requirements for)  
 IT 11103-57-4, **Vitamin, A**  
 (calf requirements for)  
 RN 11103-57-4 HCAPLUS  
 CN Vitamin A (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 50-81-7, **Vitamin, C**  
 (determination or assay of, in cooked foods)  
 RN 50-81-7 HCAPLUS  
 CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 12001-76-2, **Vitamin B**  
 (poultry requirements for)  
 RN 12001-76-2 HCAPLUS  
 CN Vitamin B (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

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FILE LAST UPDATED: 11 OCT 2004 <20041011/UP>  
 MOST RECENT DERWENT UPDATE: 200465 <200465/DW>  
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[http://www.stn-international.de/training\\_center/patents/stn\\_guide.pdf](http://www.stn-international.de/training_center/patents/stn_guide.pdf) <<<

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<http://thomsonderwent.com/coverage/latestupdates/> <<<

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 FOR FURTHER DETAILS: <http://www.thomsonderwent.com/dwpifv> <<<

>>> NEW DISPLAY FORMAT HITSTR ADDED ALLOWING DISPLAY OF  
HIT STRUCTURES WITHIN THE BIBLIOGRAPHIC DOCUMENT <<<

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L170 ANSWER 1 OF 6 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN  
AN 2003-627410 [59] WPIX  
DNC C2003-171487  
TI Composition useful for treating symptoms associated with inflammatory  
disease e.g. asthma comprises lipid soluble antioxidant and water soluble  
antioxidant.  
DC B05  
IN **MAHMOUD, F F; HAINES, D; PRATT, S G;**  
**WISE, J**  
PA (HAIN-I) HAINES D; (MAHM-I) MAHMOUD F F; (PRAT-I) PRATT S G; (WISE-I) WISE  
J  
CYC 102  
PI WO 2003061572 A2 20030731 (200359)\* EN 15 A61K000-00  
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS  
LU MC MW MZ NL OA PT SD SE SI SK SL SZ TR TZ UG ZM ZW  
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT  
RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA  
ZM ZW  
US 2003170328 A1 20030911 (200367) A61K035-78 <--  
AU 2003237411 A1 20030902 (200422) A61K000-00  
US 2004076691 A1 20040422 (200428) A61K035-78 <--  
ADT WO 2003061572 A2 WO 2003-US1428 20030116; US 2003170328 A1  
**Provisional US 2002-350298P 20020116, US 2003-345856**  
**20030116; AU 2003237411 A1 AU 2003-237411 20030116; US 2004076691 A1**  
**Provisional US 2002-350298P 20020116, CIP of US 2003-345856**  
**20030116, US 2003-621802 20030716**  
FDT AU 2003237411 A1 Based on WO 2003061572  
PRAI **US 2002-350298P 20020116; US 2003-345856**  
**20030116; US 2003-621802 20030716**  
IC ICM A61K000-00; **A61K035-78**  
ICS A61K031-07; A61K031-15; A61K031-202; A61K031-203; A61K031-366;  
A61K031-375; A61K038-05  
AB WO2003061572 A UPAB: 20030915  
NOVELTY - A composition comprises a lipid soluble antioxidant and a water  
soluble antioxidant. The lipid soluble antioxidant is a **carotenoid**  
compound.  
ACTIVITY - Antiinflammatory; Immunosuppressive; Antiasthmatic;  
Antiarthritic; Antirheumatic; Dermatological; Virucide; Antipsoriatic;  
Antiulcer; Antiathyroid; Neuroprotective; Hepatotropic; Antidiabetic;  
Ophthalmological; Antianemic; Respiratory-Gen.; Nephrotropic; Nootropic.  
MECHANISM OF ACTION - Inhibitor of activation of an immune cell  
(preferably T cell or Mast cell). Peripheral blood nuclear cell (2  
multiply 106/ml) were incubated with media (control), **astaxanthin**  
(10-6 M) (control 1) and a combination **astaxanthin** (10-6 M) plus  
Ginkgolide B (10-4 M) (test). After incubation, tumor necrosis factor  
(TNF)- alpha expression (pg/ml) of control/control 1/test was found to be  
164.52/781.34/225.76, respectively.  
USE - For alleviating a symptom of an inflammatory disease associated  
with an inflamed tissue e.g. dermal, pulmonary or bronchoalveolar tissue  
(claimed); also for treating or preventing autoimmune disease and/or  
inflammatory conditions such as asthma, arthritis (e.g. rheumatoid  
arthritis, arthritis chronica progrediente and arthritis deformans) and  
rheumatic disease; auto-immune diseases such as autoimmune hematological  
disorders (e.g. hemolytic anaemia, aplastic anaemia, pure red cell anaemia  
and idiopathic thrombocytopenia), systemic lupus erythematosus,  
polychondritis, sclerodoma, Wegener granulamatosis, dermatomyositis,

chronic active hepatitis, myasthenia gravis, psoriasis, Steven-Johnson syndrome, idiopathic sprue, autoimmune inflammatory bowel disease (e.g. ulcerative colitis and Crohn's disease), endocrine ophthalmopathy, Graves disease, sarcoidosis, multiple sclerosis, primary billiary cirrhosis, juvenile diabetes (diabetes mellitus type I), uveitis (anterior and posterior), keratoconjunctivitis sicca and vernal keratoconjunctivitis, interstitial lung fibrosis, psoriatic arthritis, glomerulonephritis (with and without nephritic syndrome, e.g. including idiopathic nephritic syndrome or minimal change nephropathy), juvenile dermatomyositis or Alzheimer's disease.

ADVANTAGE - The composition reduces adverse side effects such as decreased cell-mediated immunity compared to conventional anti-inflammatory drugs. The composition exhibits at least one of platelet activating factor receptor (PAFR) antagonist activity, PLA-2-inhibitory capability, cyclooxygenase (COX)-2 inhibitory capability or the capability to inhibit camp phosphodiesterase. The composition maximizes the ginkgolide bioavailability.

Dwg.0/4

FS

CPI

FA

AB; DCN

MC

CPI: B03-F; B04-A08C1; B04-A10; B06-A03; B06-D06; B06-F05; B07-D11; B10-E04A; B14-C03; B14-C06; B14-C09; B14-E10C; B14-F03; B14-G02D; B14-J01A4; B14-K01; B14-N03; B14-N10; B14-N12; B14-N17; B14-S01; B14-S04

TECH

UPTX: 20030915

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Components: The **carotenoid** compound is **astaxanthin** or its ester. The water soluble antioxidant is ascorbic acid or ginkgolide. The ginkgolide comprises a terpene trilactone selected from EGb 761 (preferably Ginkgolide A, Ginkgolide B, Ginkgolide J, Ginkgolide M or bilobalide), or BN52021 (preferably Ginkgolide C), or its derivative such as BN50730. Preferred Composition: The composition further comprises an histamine release inhibitor selected from cetirizine or an azelastine compound. The composition comprises an asaxanthin compound, a ginkgolide compound and/or ascorbic acid compound.

ABEX

UPTX: 20030915

ADMINISTRATION - The composition is administered systemically or locally (claimed). The administration is intravenous, intraperitoneal, oral or subcutaneous. **Astaxanthin**, vitamin C and the ginkgolide are administered simultaneously or sequentially. The dosage of **astaxanthin** is 0.1 - 4 g/kg body weight per day. The dosage of ginkgolide is 0.1 - 1000 (preferably 10 - 60 mg/kg/day). The dosage of vitamin C is 1 - 400 mg/kg/day.

EXAMPLE - No relevant example given.

L170 ANSWER 2 OF 6 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 2002-371856 [40] WPIX

DNC C2002-105216

TI A composition, useful for preventing eye disorders e.g. cataracts or glaucoma, comprises **alpha-lipoic acid**, natural mixed tocopherols, vitamin C, citrus bioflavonoids, pine bark extract, lutein, natural mixed **carotenoid** and vitamin A.

DC B05

IN BRASWELL, A G; YEGOROVA, I

PA (BRAS-I) BRASWELL A G

CYC 96

PI WO 2002020028 A2 20020314 (200240)\* EN 30 A61K035-00

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ  
NL OA PT SD SE SL SZ TR TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK  
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR  
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO

RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW  
 AU 2001088736 A 20020322 (200251) A61K035-00  
 ADT WO 2002020028 A2 WO 2001-US27487 20010904; AU 2001088736 A AU 2001-88736  
 20010904  
 FDT AU 2001088736 A Based on WO 2002020028  
 PRAI US 2000-656375 20000906  
 IC ICM A61K035-00  
 AB WO 200220028 A UPAB: 20020626

NOVELTY - A composition (I) comprises **alpha-lipoic acid** (a), natural mixed tocopherols (b), vitamin C (c), citrus bioflavonoids (d), pine bark extract (e), lutein (f), natural mixed **carotenoid** (g) and vitamin A (h).

ACTIVITY - Ophthalmological; Antidiabetic.

A double blind, placebo controlled study was conducted over a 12 month period on a total of 60 subjects (30 men and 30 women) aged 40 - 85 years, suffering from cataracts. An initial assessment of visual impairment was conducted utilizing instrumentation that determines the level of lens opacity in each subject's eyes.

The sixty subjects were separated into two separate groups of 15 men and 15 women. In the first group, each subject was administered 2 - 3 capsules of a composition (A) (**alpha-lipoic acid** (20 mg), natural mixed tocopherols (20 IU), vitamin C (60 mg), citrus bioflavonoids (100 mg), pine bark extract (30 mg), lutein (60 mg), natural mixed **carotenoids** (50 mg), and vitamin A (800 IU)). In the second group (control) each subject was administered 2 - 3 placebo capsules daily. An assessment of visual impairment for each subject lens opacity was measured at one-month intervals for a twelve month period and the data was evaluated using multiple linear regression analysis and a standard students t-test.

A statistically significant decrease in the progression of lens opacity was observed in the treated subjects upon completion of the study but not the controls. The differences between lens opacity in the treated subjects and controls were statistically significant.

MECHANISM OF ACTION - None given.

USE - For preventing or treating cataracts, age-related macular degeneration, diabetic retinopathy (claimed), and glaucoma.

ADVANTAGE - The composition protects the structure and function of an eye and protects cells from damaging effects of free radical.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: **B03-A; B03-F; B03-H; B03-K; B04-A08C1; B04-A09G; B04-A10H; B07-B03; B14-N03**

TECH UPTX: 20020626

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Composition: The composition comprises (a) (10 - 80, preferably 20 mg), (b) (10 - 80, preferably 20 IU), (c) (30 - 240, preferably 60 mg), (d) (80 - 400, preferably 100 mg), (e) (15 - 120, preferably 30 mg), (f) (30 - 240, preferably 60 mg), (g) (25 - 200, preferably 50 mg), and (h) (650 - 2400, preferably, 800 IU). The composition further comprises a carrier. Preferred Components: (d) is at least 13% flavonoids, (e) is at least 95% proanthocyanidins, (f) is at least 5% lutein and (g) is at least 7.5% **carotenoids**.

ABEX UPTX: 20020626

ADMINISTRATION - The composition is administered in a capsule form 2 - 3 times/day (claimed). The composition is administered orally or rectally.

EXAMPLE - A composition (A) comprised **alpha-lipoic acid** (20 mg), natural mixed tocopherols (20 IU), vitamin C (60 mg), citrus bioflavonoids (100 mg), pine bark extract (30 mg), lutein (60 mg), natural mixed **carotenoids** (50 mg), and vitamin A (800 IU).

AN 2002-051701 [07] WPIX

DNC C2002-015070

TI An agent for preventing retinopathy light-damaged retina, diabetic retinopathy, uveitis and cataract, contains tea extract as active ingredient.

DC B04

PA (HATA-I) HATA T; (ITOE-N) ITOEN KK

CYC 1

PI JP 2001270832 A 20011002 (200207)\* 5 A61K035-78 &lt;--

ADT JP 2001270832 A JP 2000-86086 20000327

PRAI JP 2000-86086 20000327

IC ICM A61K035-78

ICS A61P027-02

AB JP2001270832 A UPAB: 20020130

NOVELTY - A retinopathy preventive agent contains tea extract as active ingredient.

ACTIVITY - Ophthalmological; antioxidation; antidiabetic; antiinflammatory. THEA-FLAN 90S (RTM) (tea extract) was administered intraperitoneally to 10 weeks old male wister rats (body weight of 200 g for 3 days). 2500 lux of white light was irradiated continuously for 12 hours on second day of administration. THEA-FLAN 90S (RTM) was administered at a dose of 50 mg/kg and 100 mg/kg/time, intraperitoneally and a control group was irradiated with white light (2500 lux) without administering the tea extract. Electro-retinogram was measured after 7 days of dark adaptation. The result showed that electro-retinogram was improved by administration of THEA-FLAN 90S (RTM), which in turn showed the prevention of retinopathy.

MECHANISM OF ACTION - Active oxygen and free radical elimination. No test details are given for the above mentioned action in the source material.

USE - As pharmaceutical, quasi-drug, cosmetics, health food and health beverage, for preventing retinal disease/damage such as light-damaged retina, retinal iron-dust disease, premature retinopathy, diabetic retinopathy, retino-ischemic disease, uveitis and cataract, based on active oxygen or free radicals.

ADVANTAGE - The retinopathy prevention effect of the agent is increased by combining the agent with other material having anti-oxidation property, such a vitamin-A (**carotenoids**), vitamin-C, vitamin-E, **glutathione**, organic acid, amino acid and saponin. The agent is easily acquired from tea extract and is safe for use in preventing retinopathy.

Dwg.0/1

FS CPI

FA AB; DCN

MC CPI: B04-A08C2; B04-A09; B04-A10; **B14-N03**

TECH UPTX: 20020130

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Agent: The agent is active oxygen or free radical based retinopathy preventive agent. The tea extract is tea **polyphenol**.

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Extraction: THEA-FLAN 30A (RTM) (dry green tea) was extracted with hot water. The extract was subjected to column chromatography for eliminating components other than catechin and THEA-FLAN 90A (RTM) (dried green tea extract powder) was obtained. The obtained tea extract was found to contain tea **polyphenols** having basic structure of flavan-3-ol such as (-)-epicatechin, (-)-epigallocatechin, (-)-epicatechin gallate, (-)-epigallocatechin gallate, its isomers (+/-)- catechin, (-)-gallo catechin, (-)-catechin gallate, (-)-gallocatechin gallate, or theaflavin. Preferred Formulation: The agent is prepared in the form of freeze dried powder, liquid agent, tablet, powder, granule, sugar-coated tablet, capsule, suspension, emulsion, ampule, or injection.

ABEX

UPTX: 20020130

ADMINISTRATION - Tea **polyphenol** is administered at a dose of 5-10,000 mg preferably 200-1000 mg/day.

EXAMPLE - 100 mg of THEA-FLAN 90S (RTM) (tea extract), 50 mg of vitamin-C, 10 mg of vitamin-E formulation, 10 mg of (-) **carotene** formulation, 90 mg of emulsification oligosaccharide, 100 mg of crystal cellulose, 90 mg of reduced maltose starch syrup, 150 mg of starch and suitable quantity of fragrance were mixed and molded into tablets.

L170 ANSWER 4 OF 6 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 2000-564617 [52] WPIX

DNC C2000-168136

TI Oral composition used to treat macular degeneration, cataracts, elevated ocular pressure, diabetic retinopathy and glaucoma comprises **carotenoids** such as lycopene and lutein.

DC B02

IN GORSEK, W F

PA (VITA-N) VITACOST INC

CYC 1

PI US 6103756 A 20000815 (200052)\* 4 A61K031-355

ADT US 6103756 A US 1999-372055 19990811

PRAI US 1999-372055 19990811

IC ICM A61K031-355

ICS A61K031-07

AB US 6103756 A UPAB: 20001018

NOVELTY - Oral composition comprises vitamins A, E and C, magnesium, selenium, bilberry extract, L-**taurine**, lutein extract, lycopene extract, **alpha lipoic acid**, **quercetin**, rutin and citrus bioflavonoids.

ACTIVITY - Ophthalmological; antidiabetic.

No activity data is given.

MECHANISM OF ACTION - None given.

USE - The composition is used for the prevention, stabilization, reversal and treatment of age-related macular degeneration, cataracts, elevated ocular pressure, diabetic retinopathy and glaucoma.

ADVANTAGE - The composition helps to protect and neutralize free radicals that may damage vision and stops eye parts from wearing out.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: B03-A; B03-F; B03-H; B04-A08C2;  
B04-A10; B05-A01B; B05-B02C; B06-A01; B07-B03; B10-A09B;  
B14-N03

TECH UPTX: 20001018

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred composition: The composition also comprises at least one of vitamin D3, thiamine, riboflavin, niacin, vitamin B6, folic acid, vitamin B12, biotin, pantothenic acid, calcium, iodine, zinc, copper, manganese, chromium, molybdenum, n-**acetyl-cysteine**, plant extracts, biopene, malic acids, L-glycine, L-**glutathione** and boron. The composition comprises vitamin C (100-6000 mg), vitamin E (100-2000 IU), vitamin A (100-2000 IU), L-**taurine** (100-1000 mg), Se (50-600 mg), bilberry extract (40-1000 mg), lutein extract (6-100 mg), lycopene extract (6-100 mg), **alpha lipoic acid** (50-1000 mg), **quercetin** (10-1000 mg), rutin (10-1000 mg) and citrus bioflavonoids (10-1000 mg).

ABEX UPTX: 20001018

ADMINISTRATION - Administration is oral.

L170 ANSWER 5 OF 6 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN

AN 1999-560489 [47] WPIX

CR 1995-068449 [10]; 1995-206925 [27]; 1995-322020 [42]; 1995-352760 [46];  
1996-232947 [24]; 1996-259825 [26]; 1998-144831 [13]; 1998-159515 [14];

1998-159516 [14]; 1998-216524 [19]; 1998-322240 [20]; 1998-347366 [30];  
1998-398082 [34]; 1999-094962 [08]; 1999-526196 [44]; 2000-085071 [03];  
2000-194342 [12]; 2000-222354 [13]; 2001-280464 [17]

DNC **C1999-163290**

TI Nutritional supplement for improving vision.

DC B05

IN GORENBEIN, D; IBRAHIM, N

PA (AMWA-N) AMWAY CORP

CYC 1

PI US 5955102 A 19990921 (199947)\* 4 A61K009-48

ADT US 5955102 A US 1998-148567 19980904

PRAI US 1998-148567 19980904

IC ICM A61K009-48

ICS A01N065-00; **A61K035-78**

AB US 5955102 A UPAB: 20010528

NOVELTY - Nutritional supplement (NS1) comprises **docosahexaenoic acid** (DHA), lutein and at least one anthocyanoside.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a nutritional supplement (NS2) comprising 25-140 mg DHA, 1-6 mg lutein and 30-200 mg bilberry extract;

(2) a softgel capsule comprising:

(i) 50-90 weight% of a filling comprising 5-10 weight% bilberry extract, 0.1-0.5 weight% lutein, 0-0.05 weight% **zeaxanthin**, 10-15 weight% DHA and 0-10 weight% antioxidant(s) selected from vitamin C, vitamin E, vitamin A and bioflavonoids, all based on total capsule weight; and

(ii) 10-50 weight% of a shell containing 20 weight% gelatin, based on

total

capsule weight.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - The supplement is used for improving vision, especially night vision acuity, field of vision and adaptation to light.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: **B03-A; B03-F; B03-H; B04-A08C2;**

**B04-A10; B04-N02; B10-C04E; B10-E02; B14-E11; B14-N03**

TECH UPTX: 19991116

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Supplement : NS1 comprises 25-900 mg/day DHA, 1-6 mg/day lutein and 3-200 mg/day of at least one anthocyanoside, preferably in the form of a bilberry extract, and can also contain **zeaxanthin** and 1-500 mg vitamin C. NS2 comprises

0.1-0.25 mg **zeaxanthin**, 20-30 mg **eicosapentaenoic**

**acid** (EPA), 1-40 mg vitamin C and 1-80 mg lemon bioflavonoids. The

DHA:EPA ratio is more than 1.1:1, especially more than 4:1.

Preferred Capsule: This comprises (i) 70 wt.% of a filling comprising 8 wt.% bilberry extract, 0.3 wt.% lutein, 0.01 wt.% **zeaxanthin**, 12

wt.% DHA, 3 wt.% EPA, 6 wt.% vitamin C and 6 wt.% lemon bioflavonoids, all based on total capsule weight, and (ii) 30 wt.% of a shell containing 20 wt.% gelatin, based on total capsule weight.

ABEX UPTX: 19991116

EXAMPLE - The formulation comprised an inner filling which had 40 mg of softgel containing bilberry extract (90%), fructose (7%) and dextrose (3%); 7.5 mg softgel of a marigold extract containing lutein (20%), **zeaxanthin** (0.86 %) and corn oil (79.14%); 200 mg of softgel having tuna oil containing DHA (25%), EPA (6%), spearmint (0.2%); 25 mg of softgel having acerola concentrate and lemon biflavonoids; 12 mg of softgel having soy lecithin; 61.52 mg of softgel containing vegetable oil; and 41 mg softgel containing yellow beeswax. The outer shell contained a softgel containing 134.98 mg of gelatin; 59.72 mg of glycerin; and 4.98 mg of caramel colour.

L170 ANSWER 6 OF 6 WPIX COPYRIGHT 2004 THE THOMSON CORP on STN  
 AN 1998-427663 [36] WPIX  
 DNC C1998-128935  
 TI Eye drop composition for treating irritation, dryness or cataracts -  
 contains reduced **glutathione**, vitamin-A, vitamin-E and buffers.  
 DC B05  
 IN ABSHER, K; BRASWELL, A G; DUARTE, A; ABSHER, K J  
 PA (BRAS-I) BRASWELL A G; (ABSH-I) ABSHER K J; (DUAR-I) DUARTE A; (GBDA-N) GB  
 DATA SYSTEMS INC  
 CYC 20  
 PI WO 9832435 A1 19980730 (199836)\* EN 13 A61K031-195  
 RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
 W: JP  
 EP 895474 A1 19990210 (199911) EN A61K031-195  
 R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE  
 US 6194457 B1 20010227 (200114) A61K031-225  
 JP 2001504132 W 20010327 (200122) 12 A61K038-00  
 ADT WO 9832435 A1 WO 1998-US1647 19980129; EP 895474 A1 EP 1998-904733  
 19980129, WO 1998-US1647 19980129; US 6194457 B1 Provisional US  
 1997-36516P 19970129, US 1998-15755 19980129; JP 2001504132 W JP  
 1998-532251 19980129, WO 1998-US1647 19980129  
 FDT EP 895474 A1 Based on WO 9832435; JP 2001504132 W Based on WO 9832435  
 PRAI US 1997-36516P 19970129; US 1998-15755 19980129  
 IC ICM A61K031-195; A61K031-225; A61K038-00  
 ICS A61K009-08; A61K031-34; A61K031-355; A61K047-02; A61K047-38;  
 A61P027-02; A61P027-04; A61P027-12  
 ICI A61K031:07; A61K031:355; A61K038-00  
 AB WO 9832435 A UPAB: 19980911  
 A liquid eye drop composition comprises an isotonic solution of reduced  
**glutathione**, vitamin A, vitamin E and one or more buffering  
 agents.  
 USE - The composition is used to prevent or reduce the onset or  
 progression of cataracts. It may be applied at a rate of 1-8 days to the  
 eye per day, the drops preferably being applied at intervals 1-4 times per  
 day. It may also be used to alleviate irritation and/or dryness. It  
 combats oxidation within the lens of the eye.  
 Dwg.0/0  
 FS CPI  
 FA AB; DCN  
 MC CPI: B03-A; B03-H; B10-B02D; B14-N03

=> d his

(FILE 'HOME' ENTERED AT 12:56:27 ON 13 OCT 2004)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 12:56:50 ON 13 OCT 2004

L1 2 S (US20040076691 OR US20030170328)/PN OR (US2002-350298# OR US2  
 E HAINES D/AU  
 L2 117 S E3-E17,E25-E35  
 E MAHMOUD F/AU  
 L3 26 S E3,E6,E11-E15  
 E PRATT S/AU  
 L4 41 S E3  
 L5 11 S E57,E59,E63  
 E WISE J/AU  
 L6 164 S E3-E23  
 L7 135 S E45-E65

FILE 'REGISTRY' ENTERED AT 13:07:44 ON 13 OCT 2004

L8 2 S 472-61-7 OR 144-68-3



L9 11 S (472-61-7 OR 144-68-3)/CRN  
L10 195 S (C40H52O4 OR C40H56O2)/MF AND C6/ES AND 2/NR  
L11 20 S L10 AND ZEAXANTHIN  
L12 17 S L10 AND ASTAXANTHIN  
L13 36 S L11,L12  
L14 29 S L13 NOT ((D OR T)/ELS OR LABELED OR ION OR 11C# OR 13C# OR 14  
SEL RN 1 9 27  
L15 26 S L14 NOT E1-E3  
L16 26 S L8,L15

FILE 'HCAPLUS' ENTERED AT 13:12:22 ON 13 OCT 2004

L17 4633 S L16  
L18 5433 S ASTAXANTHIN# OR ZEAXANTHIN#  
E CAROTINOID/CT  
L19 12 S E4  
E CAROTENOID/CT  
L20 5174 S E8  
E E8+ALL  
E E2+ALL  
L21 17621 S E8-E10  
L22 8263 S E7  
L23 28000 S L17-L22  
E FLAVONOID/CT  
L24 634 S E8-E13  
L25 3 S E33,E34  
E E6+ALL  
L26 18306 S E4  
E POLYPHENOL/CT  
E E10+ALL  
L27 4314 S E4  
E PHENOL/CT  
E PHENOLS/CT  
L28 4314 S E24  
L29 5981 S E3 (L) (POLY OR POLYPHENOL?)

FILE 'REGISTRY' ENTERED AT 13:16:54 ON 13 OCT 2004

L30 1 S QUERCETIN/CN

FILE 'REGISTRY' ENTERED AT 13:18:00 ON 13 OCT 2004

FILE 'HCAPLUS' ENTERED AT 13:18:10 ON 13 OCT 2004

L31 9944 S L30  
L32 13891 S QUERCETIN# OR QUERCETOL OR QUERCITIN# OR QUERTIN# OR SOPHERET  
L33 21440 S BILBERRY OR BLUEBERRY OR HOPS OR GRAPESEED OR GRAPE SEED OR G  
E BILBERRY/CT  
L34 180 S E3-E6 OR E3+OLD,NT  
E BLUEBERRY/CT  
L35 630 S E3-E7,E9  
L36 780 S E3+OLD,NT,PFT,RT  
E CHERRY/CT  
L37 2357 S E3-E22,E24,E29  
E E3+ALL  
L38 3721 S E13,E12+NT  
E HOPS/CT  
L39 1543 S E3  
E E3+ALL  
L40 322 S E2  
E E2+ALL  
L41 3395 S E8,E9,E7+NT  
L42 1148 S HUMULUS  
L43 2001 S VACCINIUM  
L44 414 S CERASUS  
E CURCUMA/CT

L45           E E26+ALL  
 1203 S E9-E12,E8+NT OR E7  
 L46           1043 S TURMERIC  
               E GREEN TEA/CT  
               E E3+ALL  
 L47           1840 S E2  
               E GREEN TEA/CT  
               E E7+ALL  
 L48           503 S E2  
               E GREEN TEA/CT  
               E E9+ALL  
               E GREEN TEA/CT  
               E E4+ALL  
               E TEA PRODUCTS/CT  
 L49           3038 S E3 (L) GREEN  
               E GRAPESEED/CT  
               E GRAPE SEED/CT  
 L50           5 S E5  
               E GRAPE/CT  
 L51           464 S GRAPE#/CW (L) SEED  
               E BIOFLAVONOID/CT  
               E E4+ALL  
 L52           230 S E2  
 L53           796 S BIOFLAVON?

FILE 'REGISTRY' ENTERED AT 13:27:22 ON 13 OCT 2004

L54           1 S 329900-75-6  
               E COX/CN  
 L55           2 S E6-E8

FILE 'HCAPLUS' ENTERED AT 13:27:45 ON 13 OCT 2004

L56           5400 S L54,L55  
 L57           29599 S COX OR COX2 OR COX3 OR CYCLOOXYGENASE  
 L58           920 S L23 AND L24-L29,L31-L53,L56,L57

FILE 'REGISTRY' ENTERED AT 13:28:55 ON 13 OCT 2004

L59           7 S (VITAMIN A OR VITAMIN B OR VITAMIN C OR VITAMIN D OR VITAMIN  
 L60           1 S A-LIPOIC ACID/CN  
 L61           6 S (EICOSAPENTAENOIC ACID OR DOCOSAHEXAENOIC ACID)/CN  
 L62           1 S GLUTATHIONE/CN  
 L63           2 S (TAURINE OR N-ACETYL-L-CYSTEINE)/CN

FILE 'HCAPLUS' ENTERED AT 13:30:41 ON 13 OCT 2004

L64           264 S L58 AND ANTIOXIDANT?/CW  
               E ANTIOXIDANT/CT  
 L65           264 S L58 AND E12,E13,E16-E20,E23,E24,E24,E26,E27  
               E E20+ALL  
               E E2+ALL  
 L66           264 S L58 AND E5,E6  
 L67           476 S L58 AND (L59 OR VITAMIN() (A OR B OR C OR D OR "E") OR ASCORBI  
 L68           37 S L58 AND (L60 OR ALPHA LIPOIC ACID)  
 L69           24 S L58 AND (L61 OR EICOSAPENTAENOIC ACID OR DOCOSAHEXAENOIC ACID  
               E OMEGA 3/CT  
               E E7+ALL  
 L70           27 S L58 AND E2  
 L71           5789 S FATTY ACID?/CT (L) (N3 OR N 3 OR OMEGA 3 OR OMEGA3)  
 L72           30 S L58 AND L71  
 L73           525 S L64-L70,L72  
 L74           99 S L73 AND (L62,L63 OR GLUTATHION? OR TAURIN# OR N ACETYL L CYST  
 L75           103043 S EYE+OLD,NT,PFT,RT/CT OR EYE, DISEASE+OLD,NT,PFT,RT/CT  
               E EYE+ALL/CT  
 L76           185146 S E26+OLD,NT,PFT,RT OR E27+OLD,NT,PFT,RT OR E28+OLD,NT,PFT,RT  
               E EYE/CT

L77 941 S E57  
 L78 0 S E156  
 L79 24611 S E175,E176  
 L80 595 S E205  
 L81 3720 S E256,E257,E258  
 L82 2405 S E259,E267  
 L83 567 S L58 AND L75-L82  
 L84 355 S L83 AND L73  
 L85 80 S L84 AND L74  
 L86 5 S L85 AND (EYE? OR ?OCULAR? OR ?OPHTHALM? OR ?OPHTHALM?)  
 L87 22 S L58 AND (EYE? OR ?OCULAR? OR ?OPHTHALM? OR ?OPHTHALM?)  
 L88 19 S L87 AND L64-L73  
 L89 22 S L86-L88  
 L90 75 S L85 NOT L89  
 L91 47 S L90 NOT COSMETIC#/SC,SX,CW  
 L92 28 S L90 NOT L91  
 L93 1 S L1-L7 AND L58  
 L94 5 S L1-L7 AND L23  
 L95 4 S L94 NOT ASTHMA?  
 L96 25 S L93,L95,L89  
 L97 20 S L96 AND (PD<=20020123 OR PRD<=20020123 OR AD<=20020123)  
 L98 20 S L93,L95,L97  
 L99 5 S L96 NOT L98  
 L100 25 S L98,L99  
 L101 24 S L100 AND (EYE? OR ?OCULAR? OR VISION? OR OPHTHALM? OR OPHTHALM)  
 L102 1 S L100 NOT L101  
 L103 7 S L100 AND ?INFLAM?  
 L104 5 S L100 AND (?ITIS OR ?ITIC)  
 L105 25 S L100-L104  
 L106 25 S L105 AND L1-L7,L17-L29,L31-L53,L56-L58,L64-L105  
 SEL HIT RN

FILE 'REGISTRY' ENTERED AT 13:49:06 ON 13 OCT 2004

L107 21 S E1-E21  
 L108 16 S L107 NOT (1405-87-4 OR 34787-01-4 OR 1695-77-8 OR 378-44-9 OR

FILE 'HCAPLUS' ENTERED AT 13:51:52 ON 13 OCT 2004

L109 178822 S L108  
 L110 507 S L109 AND L58  
 L111 20 S L110 AND L106  
 L112 5 S L106 NOT L111  
 SEL DN AN 3 5  
 L113 3 S L112 NOT E22-E27  
 L114 23 S L111,L113

FILE 'REGISTRY' ENTERED AT 13:53:52 ON 13 OCT 2004

FILE 'HCAPLUS' ENTERED AT 13:54:07 ON 13 OCT 2004

FILE 'WPIX' ENTERED AT 13:54:37 ON 13 OCT 2004

L115 1 S L1  
 E US20040076691/PN  
 L116 1 S E3  
 L117 1 S L115,L116  
 E ASTAXANTHIN/DCN  
 E E3+ALL  
 L118 319 S E2  
 E ZEAXANTHIN/DCN  
 E E3+ALL  
 L119 218 S E2 OR 1153/DRN  
 L120 685 S L18/BIX  
 L121 4018 S (CAROTENOID? OR CAROTINOID? OR CAROTENE?)/BIX  
 L122 3196 S V310/M0,M1,M2,M3,M4,M5,M6

L123 4035 S (B03-A OR C03-A)/MC  
 L124 8102 S L118-L123  
 L125 74 S L124 AND A61P027/IPC  
 L126 318 S L124 AND P922/M0,M1,M2,M3,M4,M5,M6  
 L127 335 S L124 AND (B12-L04 OR C12-L04 OR B14-N03 OR C14-N03)/MC  
 L128 397 S L125-L127  
 L129 54 S L128 AND A61K035-78/IPC  
 L130 784 S (QUERCETIN? OR QUERCETOL OR QUERCITIN? OR QUERTIN? OR SOPHERE  
     E QUERCETIN/DCN  
     E E3+ALL  
 L131 489 S E2 OR 0971/DRN  
 L132 13526 S (POLYPHENOL? OR POLY PHENOL?)/BIX  
 L133 20 S L128 AND L130-L132  
 L134 124 S L128 AND (B03-B OR B03-C OR B03-D OR B03-E OR B03-F OR B03-G  
 L135 9 S L128 AND (C03-B OR C03-C OR C03-D OR C03-E OR C03-F OR C03-G  
 L136 69 S L128 AND (V321 OR V322 OR V323 OR V324 OR V330 OR V340 OR V35  
     E VITAMIN B/DCN  
     E E11+ALL  
 L137 86 S L128 AND (E2 OR 0035/DRN)  
     E VITAMIN D/DCN  
     E E4+ALL  
 L138 82 S E2  
 L139 591 S E4 OR 0007/DRN  
 L140 847 S E6 OR 0276/DRN  
     E VITAMIN E/DCN  
     E E3+ALL  
 L141 4497 S E2 OR 0179/DRN  
 L142 106 S L128 AND L138-L141  
 L143 203 S L129,L133-L137,L142  
 L144 49 S L143 AND (B14-C03 OR C14-C03 OR B12-D07 OR C12-D07)/MC  
 L145 66 S L143 AND P420/M0,M1,M2,M3,M4,M5,M6  
 L146 71 S L144,L145  
 L147 38 S L143 AND (GLUTATHION? OR TAURIN? OR N ACETYL L CYSTEIN? OR AC  
     E GLUTATHION/DCN  
     E E4+ALL  
 L148 14 S L143 AND (E2 OR 0297/DRN)  
     E TAURINE/DCN  
     E E3+ALL  
 L149 12 S L143 AND (E2 OR 0828/DRN)  
     E N ACETYL/DCN  
     E N-ACETYL/DCN  
     E ACETYLCYSTEINE/DCN  
     E E4+ALL  
 L150 10 S L143 AND E2  
     E LIPOIC ACID/DCN  
     E E3+ALL  
 L151 20 S L143 AND (E2 OR (ALPHA LIPOIC ACID OR LIPOIC ACID)/BIX)  
     E EICOSAPENTAENOIC/DCN  
     E E5+ALL  
 L152 3 S L143 AND E2  
 L153 0 S L143 AND E8  
     E DOCOSAHEXAENOIC ACID/DCN  
     E E4+ALL  
 L154 1 S L143 AND E2  
 L155 8 S L143 AND (EICOSAPENTAENOIC ACID OR DOCOSAHEXAENOIC ACID OR OM  
 L156 57 S L147-L155  
 L157 21 S L146 AND L156  
     SEL DN AN 19  
 L158 1 S L157 AND E1-E2  
 L159 36 S L156 NOT L157  
     SEL DN AN 3 6 9 11 12 13 16 17 18 23 26 27 28 30 32 34 35  
     SEL DN AN 3 6 9 11 12 13 16 17 18 23 26 27 28 30 32 34 35 36  
 L160 18 S L159 AND E38-E74

SEL DN AN 7 9-12  
L161 5 S L160 AND E75-E84  
L162 1 S L117 AND L118-L161  
L163 6 S L161,L162  
E MAHMOUD F/AU  
L164 2 S E5  
E HAINES D/AU  
L165 35 S E3-E12  
E PRATT S/AU  
L166 15 S E3,E6  
E WISE J/AU  
L167 111 S E3-E20  
L168 159 S L164-L167  
L169 1 S L124 AND L168  
L170 6 S L163,L169  
L171 141 S L124 AND (POLYPHENOL? OR POLY PHENOL?)/BIX  
L172 7 S L171 AND L128

FILE 'WPIX' ENTERED AT 14:36:44 ON 13 OCT 2004

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